



ANNUAL REPORT
OF THE
PUBLIC WORKS DEPARTMENT
FOR THE
YEAR ENDING DECEMBER 31, 1941.

Boston, January 2, 1942.

HON. MAURICE J. TOBIN,
Mayor of Boston.

DEAR MR. MAYOR,—In compliance with the provisions of section 24 of chapter 3 of the Revised Ordinances of 1925, I respectfully submit the Annual Report of the Public Works Department for the year ending December 31, 1941.

The total budgetary expenditures of the department for the year were \$7,179,458.06 of which \$875,401.94 represents expenditures in connection with the Work Relief Program. The total revenue from all sources, except from the operation of the Sumner Tunnel and from the sale of water, totalled \$148,155.73. The Sumner Tunnel revenue amounted to \$1,110,452.22 and the revenue from the sale of water totalled \$4,997,949.03. The resulting Sumner Tunnel deficit of \$58,731.40, after deducting the \$100,000 subsidy paid by the Commonwealth to the City of Boston out of the so-called Highway Fund, is the lowest in the history of the tunnel. The surplus resulting from the sale of water amounted to \$639,584.02.

This marks the fourth consecutive year of your administration that the Water Division has shown a sur-

plus, which is a remarkable record when one considers that, prior to your administration, the Water Division had a deficit each year for seven successive years.

There were 2,104 employees in the department as of December 31. This represents a loss of 102 employees during the year and a loss of 446 since the start of your administration in January of 1938.

A thorough study is being made of the problems involving the disposal of garbage and refuse from the area of the city now included in the so-called ten-year Coleman contract and I am confident that a satisfactory solution to this problem will be reached long before the termination date of the contract, which is June 30, 1942. While, unquestionably, and as pointed out in my annual report for the year 1938, the city will, in the near future, have to dispose of its garbage and refuse by means of incineration, the declaration of war on December 8 will make it impossible to obtain the necessary materials and skilled labor to construct incinerators in 1942. Nevertheless, I feel that, upon the expiration date of the present ten-year contract, we will be able to put into effect a temporary disposal method that will be as sanitary as the present system and more economical for the city.

The department continued to extend the districts of the city from which garbage and refuse is collected under the contract system, Back Bay, a section of Roxbury called the Dudley district and South Boston being added to the contract collection area this year.

The department undertook its first activity of a Civilian Defense nature when it made a house to house collection for aluminum in July coincidental with the country-wide drive for this essential material. We collected in excess of 111,000 pounds which compared favorably with collections made in other large cities.

Under date of January 25 a contract was awarded to the Pitometer Company, Inc., of New York, for the conducting of a so-called water waste survey in the Charlestown district. The contract stipulated that the city would pay only for the value of the water waste actually located to the limit of \$4,900, although the survey would be completed even though the above-referenced maximum amount had been paid to the contractor. The work provided for was satisfactorily completed in July and the value of the leaks uncovered was

far in excess of the \$4,900 paid the contractor. Another contract was awarded therefor on September 19 to the same contractor for a water waste survey in the City Proper, involving both the low and high service system. This contract provides for a maximum of \$1,400 to be paid by the city for water waste actually uncovered. The work is proceeding satisfactorily and will be completed sometime in 1942.

The program of the Work Projects Administration was substantially curtailed during the year as compared with previous years with the result that the department constructed approximately fifty new streets under contract and also installed new sewerage facilities and effected substantial bridge repairs under the contract system.

The resurfacing of Atlantic avenue and Commercial street was completed by W. P. A. forces. The new cement concrete surface is a big improvement over the old rough granite block surface and will be instrumental in expediting the movement of traffic on this busy waterfront street. At this writing arrangements are being made for the removal of the elevated structure, the removal of which will further increase the vehicular carrying capacity of both Atlantic avenue and Commercial street and tend to revive this somewhat decadent area.

Another notable improvement effected by W. P. A. was the completion of the pedestrian overpass which crosses Old Colony avenue and Columbia road, near Old Harbor Village. This structure, which was designed by department engineers, is one of the most modern of its kind and provides cantilever ramps for pedestrian use in place of the old style stairways.

In accordance with recommendations submitted by the committee on snow removal in the previous year, the department constructed a new snow dump at the site of the abandoned North Ferry at the foot of Battery street. This dump was used for the first time in February and it has lived up to our expectations. The lack of snow dumps is a problem continually facing the department and the acquisition therefor of this new one will be of lasting benefit to the department.

A comprehensive and much needed bridge reconstruction program was started during the year, the necessary funds being provided under the provisions of

an order that was passed in the City Council on June 30. This order authorized the issuance, under the provisions of section 7 of chapter 44 of the General Laws, of bonds in the total amount of \$500,000 for bridge construction work.

A contract therefor was awarded to the contracting firm of Martin J. Kelly in September on reconditioning sixteen bridges located in various sections of the city. The work provided for has been practically completed and the structures included in the contract are now in a satisfactory condition.

A contract was also awarded to Baker & Co. for the reconstruction of the Charlestown Bridge, including the installation of an open steel mesh type of decking. This decking not only reduces the cost of maintenance but is greatly superior to the old type wooden decking in that it eliminates the dangerous hazard always existing to motorists on slippery wooden decks caused by ice or accumulations of snow or rain. It is our intention to install this open grid type of steel decking on every bridge in Boston, where practicable, over a period of a few years, although the completion of this program will be delayed because of conditions caused by the war. The progress of the Charlestown Bridge job is slow because of difficulty in obtaining the necessary steel. The latter material is getting very difficult to obtain because of the use being made of it in our National Defense program.

Contracts were also awarded late in the year for the reconstruction of the Longfellow Bridge, which is under the jurisdiction of the Boston and Cambridge Bridge Commission, the Meridian Street Bridge and the Summer Street Bridge, over the Reserved Channel. The work on these structures is slow in starting because of the difficulty in getting the essential and critical materials needed for the work.

Appended hereto are complete and detailed reports submitted by the five division engineers of the department covering the activities of their respective divisions during the year.

Respectfully submitted,

GEORGE G. HYLAND,
Commissioner of Public Works.

The records of the department show that there are now 2,104 persons eligible for employment in the several divisions, and of that number 2,056 were upon the January, 1942, pay rolls.

Grade and Number of Employees.

TITLE.	SERVICES.									
	Central Office.	Paving and Lighting.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Ferry.	Tunnel.	Water.	Total.
Commissioner.....	1									1
Division engineers.....		1	1	1		1			1	5
Engineer, chief.....		1	1							2
Assistant engineers (civil).....		12	25	1		11			5	54
Draftsmen.....		4	6			1			1	12
Instrumentmen.....		11	16			2			3	32
Rodmen.....		8	2			2				12
Blueprinters.....			5							5
Superintendents.....		2								2
Supervisors.....	1	2		1						4
General foremen.....									1	1
Foremen.....		11	8	11	12	1		1	6	50
Chief inspectors.....		1	1							2
Inspectors-subforemen.....		46	29	44	25	2		2	19	167
Executive secretary.....	1								1	2
Chief clerks.....		1	1						2	4
Executive clerks.....	1	1	1			1			2	6
Clerks-stenographers.....	7	28	11	6	1	2	1	7	49	112
Telephone operators.....		1							1	2
Cashiers and assistants.....				1			1	1	2	5
Storekeeper.....				2			1		1	4
Patternmaker.....									1	1
Veterinarian-medical inspectors.....					2					2
Chemists and assistants.....		1								1
Cement testers and assistants.....			3							3
Captains.....							4			4
Quartermaster-pilots.....							4			4
Deckhands.....							11			11
<i>Carried forward.....</i>	11	131	110	67	40	23	22	11	95	510

Grade and Number of Employees.—Concluded.

TITLE.	SERVICES.									
	Central Office.	Paving and Lighting.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Ferry.	Tunnel.	Water.	Total.
<i>Brought forward</i>	11	131	110	67	40	23	22	11	95	510
Matrons.....							4			4
Engineers (steam).....		9	5				4			18
Oilers.....			9				5			14
Firemen.....		1	4				11			16
Gatemen-tollmen-guards.....			5				11	33		49
Sergeant-tollmen-guards.....								4		4
Gatemen-filth hoisters.....			5							5
Meter readers.....									32	32
Drawtenders and assistants.....						141				141
Chief and electricians.....			2			1		14		17
Master mechanics.....		3		1			1		4	9
Auto mechanics-repairers.....		23	3	1	1					28
Blacksmiths-horseshoers.....		4	1	16			1		1	23
Carpenters-joiners.....		12	3	1		11	3			30
Harnessmaker and assistant.....				1						1
Machinists.....			4			1	5	2	10	22
Painters.....		7		7		2	2			18
Pavers.....		33				1				34
Plumbers-pipefitters.....							2		131	133
Riggers-roofers.....							2			2
Sewer cleaners-flushers.....			25							25
Catch-basin cleaning machine oper- ators.....			7							7
Stonecutters-brick masons.....		5	6	1					1	13
Wheelwrights and assistants.....		2		5						7
Head chauffeurs.....		5								5
Chauffeurs, etc.....		70	28	68	82	5		12	39	304
Working foremen laborers.....		1	1		1	3				6
Laborers, teamsters, etc.....		146	55	179	122	2	5	3	77	589
Wharfingers.....				1						1
Yardmen and yardmasters.....		4	2	2	2	1			2	13
Constables.....		1			14				9	24
Totals.....	11	457	275	350	262	191	78	79	401	2,104

**Number of Employees Actually Employed January 1, 1941, and
January 1, 1942.**

	Tunnel.	Central Office.	Bridge.	Ferry.	Water.	Paving and Lighting.	Sanitary.	Street Cleaning.	Sewer.	Total.
January 1, 1941	75	11	191	78	406	458	378	277	285	2,159
January 1, 1942	77	11	188	74	394	445	346	257	264	2,056

Total Eligible Force.

January 1, 1941	77	11	193	81	413	470	385	285	291	2,206
January 1, 1942	79	11	191	78	401	457	350	262	275	2,104

**Appointments, Transfers, Resignations, Retirements, Deaths, Etc., of
Employees.**

Died.	Retired.	Transferred to Other Depart- ments.	Transferred to Other Services.	Discharged.	Resigned.	January 1, 1941.	SERVICES. 1941-1942.	January 6, 1942.	Transferred from Other Services.	Transferred from Other Depart- ments.	Reinstated.	Appointed.
....	1	.....	1	....	....	11	Central Office.....	11	1	.....	....	1
2	3	1	1	....	....	193	Bridge.....	191	2	.....	....	3
1	5	.....	.....	.....	.....	81	Ferry.....	78	2	.....	....	1
8	18	.....	12	....	4	470	Paving and Lighting.....	457	12	4	3	10
11	12	.....	37	....	8	385	Sanitary.....	350	27	1	2	3
9	14	.....	30	....	16	285	Street Cleaning.....	262	38	.....	4	4
4	9	.....	3	....	6	291	Sewer.....	275	1	2	2	1
2	14	.....	3	....	2	413	Water.....	401	3	1	1	4
1	....	2	2	....	3	77	Tunnel.....	79	3	3	....	4
38	76	3	89	....	39	2,206	Totals.....	2,104	89	11	12	31

MAINTENANCE APPROPRIATIONS AND EXPENDITURES.

DIVISION OR SERVICE.	Total Appropriations, Including Transfers.	Expenditures.	Unexpended Balance.
Central Office	\$32,113 00	\$31,909 00	\$204 00
Bridge Service	412,166 64	411,326 29	840 35
Ferry Service	246,330 80	241,839 62	4,491 18
Tunnel Service	232,802 62	232,761 65	40 97
Highway Division:			
Paving Service	880,877 32	879,575 44	1,301 88
Lighting Service	936,072 64	935,646 16	426 48
Sanitary Service	2,089,011 96	2,076,762 51	12,249 45
Sewer Service	441,853 92	435,257 39	6,596 53
Water Service	1,101,343 35	1,058,978 06	42,365 29
Totals	\$6,372,572 25	\$6,304,056 12	\$68,516 13

EXPENDITURES FROM SPECIAL APPROPRIATIONS, ETC.

Bridges, construction of (revenue)	\$80,710 80
Bridges, repairs, etc.	17,596 95
Public ways, construction of (revenue)	127,469 43
Public ways, construction of (non-revenue)	199,380 53
Reconstruction of streets	19,110 71
Snow removal	514,889 96
Sewerage works (revenue)	133,705 41
Sewerage works (non-revenue)	92,765 98
Bridges, reconstruction and repair of (P. W. A.)	8,000 00
Highways, making of	41,401 42
Work relief program:	
Paving	\$557,868 89
Bridge	38,386 77
Sanitary	1,237 22
Sewer	277,909 06
	875,401 94
Totals	\$2,110,433 13

REVENUE.

On Account of the Public Works Department.

Central Office:
 Sale of plans, etc. \$781 00

Bridge Service:
 Clerical service \$250 00
 Charlestown Bridge:
 Rents 1,050 00
 Charlestown Bridge 948 84
 Chelsea North Bridge 78 33
 Chelsea South Bridge 349 55
 Malden Bridge 98 15
 Damage to property 175 00
 Sale of motor 8 93
 Junk 47 46

3,006 26

Ferry Service:
 Tolls \$22,464 15
 Rent 199 17
 Cleaning telephone booths 18 00
 Commission on telephones 8 88
 Junk 58 07

22,748 27

Sumner Tunnel:
 Tolls \$1,109,685 00
 From state 100,000 00
 Damage to pole 735 19
 Commission on telephone 8 28

1,210,428 47

Lighting Service:
 Damage to posts 332 00

Paving Service:
 From assessments on abutters for
 cost of laying sidewalks in front
 of their premises, including ma-
 terial for same:
 Assessments added to taxes . . . \$3,798 42
 Assessments paid in advance . . . 125 91
 Unapportioned assessments . . . 2,901 54
 Permits 15,717 73
 Sale of material, etc. 3,294 25
 Labor and materials furnished . . . 1,279 31
 Repair of signs, etc. 5 00
 Rent of land 347 50
 Junk 400 45
 Public Ways, construction of (from
 Commonwealth) 5,305 32
 Street openings account 11,833 71

45,009 14

Sewer Service:

Disposal of sewage	\$20,837 00
Labor and materials furnished	517 68
Entrance fees	2,337 00
Junk	122 30
Rent	60 00

\$23,873 98

Sewerage Works:

Assessments under chapter 450, Acts of 1899:

Added to taxes	\$29,094 69
Paid in advance	1,779 83
Unapportioned	4,191 99
Services of inspector	330 65

35,397 16

Sanitary Service:

Collection of commercial waste	\$15,301 34
Sale of junk, etc.	691 73
Sale of manure	714 85
Sale of horses	300 00

17,007 92

Water Service:

Water rates	\$4,646,481 50
Water added to taxes	220,414 27
Tax Titles	57,373 03
Service pipes for new water takers, extending repairing etc.	42,949 97
Fees on overdue rates	8,287 29
Sale of junk, etc.	8,464 28
Elevator and fire pipe connections	5,469 65
Damage to property	513 22
Relocating hydrants	1,069 67
Labor and materials	1,951 88
Testing meters	447 75
Weighing fees, etc.	591 73
Miscellaneous income	410 00
Interest	19 79
Reimbursement	8 00

4,994,452 03

Grand Total \$6,353,036 23

PART II.
APPENDICES.

APPENDIX A.

REPORT OF THE DIVISION ENGINEER OF THE
BRIDGE AND FERRY DIVISION.

BOSTON, January 2, 1943.

To the Commissioner of Public Works.

DEAR SIR,— I respectfully submit the following report of the income, expenditures and operation of the Bridge and Ferry Division for the year ending December 31, 1941. The appropriations and expenditures of the Division were as follows:

Bridge Service.

Balance, 1940	\$6,876 75
Regular appropriation, 1941	404,539 89
Transfers to	750 00
	<hr/>
	\$412,166 64
Expenditures, 1941	411,326 29
	<hr/>
Balance	<u>\$840 35</u>

Bridges, Repairs, Etc.

Balance from 1940	\$8,278 79
1941 appropriation	20,000 00
	<hr/>
	\$28,278 79
Transfers from	9,500 80
	<hr/>
	\$18,777 99
Expenditures, 1941	17,596 95
	<hr/>
Balance	<u>\$1,181 04</u>

Bridges, Reconstruction and Repairs of, P. W. A.

Balance, 1940	\$11,852 77
Expenditures, 1941	8,000 00
	<hr/>
Balance	<u>\$3,852 77</u>

Bridges, Construction of.

Appropriation, 1941	\$148,323 45
Transfers to	2,049 94
	<hr/>
	\$150,373 39
Expenditures, 1941	80,710 80
	<hr/>
Balance	<u>\$69,662 59</u>

Ferry Service.

Balance from 1940	\$2,000 00
Regular appropriation	219,374 23
Transferred to	30,150 00
	<hr/>
	\$251,524 23
Transferred from	9,921 84
	<hr/>
	\$241,602 39
Expenditures	241,602 39
	<hr/>
Balance	<u>00 00</u>

Sumner Traffic Tunnel.

Regular appropriation	\$266,397 00
Expenditures	232,802 62
	<hr/>
Balance	<u>\$33,594 38</u>

The above does not include certain expenditures for construction work for other divisions and departments, which work was supervised by the engineers of this division.

Under orders of the Department of Public Utilities, Commonwealth of Massachusetts, schedules of tolls and charges for the use of the Sumner Traffic Tunnel, between Boston Proper and East Boston, were approved, covering the year 1941.

The city has been operating only one ferry, the so-called "South Ferry," since early in 1933, with the Boston terminus at Eastern avenue and the East Boston terminus at Lewis street.

A change of boat operations was put into effect April 29, 1938. This calls for a 30-minute boat schedule daily, starting from East Boston at 6 a. m. and 6.15 a. m. from Boston; this boat continues to operate until 10 p. m.

daily. A second boat starts from East Boston at 7.15 a. m., permitting of a 15-minute schedule, and continues until 11 a. m. At 2 p. m. it resumes operation and remains in operation until 6.15 p. m. The second boat does not operate on Sundays or holidays.

City forces built a new ferry headhouse at the South Ferry, East Boston, to replace the one destroyed by fire on April 8, 1941.

The following Federal Relief Projects were sponsored by this division during the year:

WORKS PROGRESS ADMINISTRATION.

Project 22323.

Construction of a Footbridge at Old Harbor Village and Reconstruction of Blue Hill Avenue and Everett Street Bridges.

Footbridge at Old Harbor Village.

Work was started on the building of this footbridge on December 12, 1940, and was completed and dedicated by his Honor the Mayor on September 21, 1941, at a total cost to the city of \$24,869.26.

Reconstruction of Blue Hill Avenue Bridge.

Work was started December 12, 1940, and completed September 8, 1941, at a total cost to the city of \$11,748.31. The original wood block surface was replaced with Type I, which to date has stood up very well.

Reconstruction of Everett Street Bridge.

Work was started December 12, 1940, and completed March 24, 1941, at a total cost to the city of \$8,589.74. The wooden deck was entirely removed and replaced.

SUMNER TUNNEL.

Summary of Work During 1941.

W. P. A. Project No. 21966 — Renovate and Improve Sumner Tunnel.

The following work was completed under this project:

At East Boston Plaza.— Erected retaining wall and installed stone facing and capping. Installed concrete base and erected lighting standard. Raked and painted

with waterproofing the stone wall at plaza incline. Cleaned and painted fences around building.

At East Boston Vent Building.—Raked and painted with waterproofing the walls of the high tension room. Erected walls and installed frames and doors for store-room and shop on the third and fourth floors. Cleaned and painted fans, air regulators and fences.

At Boston Vent Building.—Raked and painted with waterproofing the walls of the high tension room. Erected walls and roof and installed frames and doors for shop on the fourth floor. Cleaned and painted fans, air regulators and fences.

At Administration Building.—Installed night depository head in vault. Erected and painted grille partitions in basement. Cleaned and painted fences around building.

At Boston Plaza.—Raked and painted with waterproofing the stone wall on plaza incline.

In Tunnel.—Cleaned and painted frames and covers of splicing chambers, doors of niches, baffle plates, hand rails, fire line on south wall curb and discharge pipe under roadway.

Erected guards on fire line at hose niches, waterproofed and numbered hose niches, cut hole and installed bulkhead door in west wall of water chamber.

Installed four (4) new fire line connections and changed thirty-six (36) valves and hose connections from 1½ inches to 2½ inches.

Installed a loop of 20,909 feet of 300,000 C. M. cable, including cross ties and connections to station ground systems at the Boston and East Boston Ventilation Buildings. Unfinished work on this item included the installation of four (4) cross ties of 300,000 C. M. cable in the harbor section and ten (10) connections between the high and low tension splicing chambers and the tunnel steel rings. This work was not completed because the electricians employed by the W. P. A. left the project for outside work other than W. P. A. and were not replaced by other electricians.

The unfinished condition of this ground network leaves the conditions surrounding the lead sheathed cables about the same as before the cable was installed. The primary reason for installing this network of grounding was to lengthen the life of the present lead sheathed cables by picking up any electrolytic or stray currents off the cable sheaths and metal work at solidly bonded

joints. The grounding system was designed to overcome the conditions mentioned above, which forced us to install a new telegraph cable in 1935 and a new metering cable in 1937.

Unless the grounding system is completed as recommended, the purpose for which it was installed cannot be gained.

Police Department Project — Police Station 8.

This project was for the building of a covered basin to house police launches and a marine railway to take out vessels when necessary. The work on the shelter basin was completed in 1940. The work on the marine railway was completed this year with the exception of certain adjustments to the machinery. Plans were prepared and work supervised by this division for the Police Department.

PROPOSED PROJECT.

South Ferry Drops, Headhouse and Meter Room, Boston and East Boston Sides.

In October, 1939, a project was submitted to the W. P. A. for work at the South Ferry drops, headhouse and meter room, Boston and East Boston sides; repairing fire damage, painting and repairing, rebuilding drop suspension and floor system. Work was started and continued, after approval of the project, until all available money was expended. A supplementary project was written up in 1940 for the completion of this work, and the same was approved but never started due to shortage of skilled labor.

The more important works undertaken during the past year in the Bridge and Ferry Division, in addition to W. P. A. projects, were constructing a snow dump at the North Ferry, Boston; removing snow and ice in area No. 3; removing snow and ice in area No. 10; redecking the drawspan of the Dover Street Bridge, over Fort Point Channel; bridge reconstruction work on various bridges; construction work on the Warren Bridge, over the Charles river; construction work on the Longfellow Bridge, over the Charles river; building a footway at Parsons street, Brighton; construction work on the drawspan of the Meridian Street Bridge; repairing hull, etc., of ferryboat "Ralph J. Palumbo"; repair-

ing hull, etc., of ferryboat "Daniel A. MacCormack"; bridge construction work on Charlestown Bridge, over the Charles river.

BRIDGE SERVICE.

Charlestown Bridge Draw.

Since the whole of the deck system of roadways and sidewalks finally required renewing, due to wear and rotting of the wooden members, and also that the spruce sheathing of the roadways had been considered a tributary cause to skidding of automobiles in moist weather, some sort of grill deck for the roadways was suggested. After a study of various types of grill decks and the resulting effect on the bridge trusses and machinery had been completed a contract was publicly advertised for the removal of the whole of the present deck system, not including the steel stringers, and installing grill decks in the side or principal roadways of the draw but retaining the original or wooden type decks in the center roadway; this last was deemed advisable since the street car tracks in the center roadway made the installation of the grill type decks impractical.

On September 2, 1941, the Mayor approved a contract with the Baker Company, the low bidder, for accomplishing this work. However, due to the National Emergency the necessary materials for completing this contract were not allowed by the Office of Production Management. For this reason no work was started.

Dover Street Draw.

Due to normal wear and the age of the deck planking, stringers and wooden sidewalks, the renewing of these members became necessary.

The Mayor approved a contract on July 7, 1941, with A. Orlando, Inc., the low bidder, for doing this work. In order to interfere as little as possible with the movement of traffic, vehicular and waterborne, two requirements of the contract were to keep the draw in operation and to maintain one line of vehicular traffic and one sidewalk at all times; while these requirements extended the number of working days to complete the contract the maintaining of the services justified the provisions noted above. As work progressed and the steel struc-

turals were uncovered, necessary renewals and repairs to such steel members were completed.

Work under this contract was completed on September 22, 1941, at a cost of \$17,016.66.

Meridian Street Draw.

This draw, built in 1912, supposedly as a temporary structure, has been by far the busiest bridge, so far as openings are concerned of any of the drawbridges; there have been several counts of more than 1,000 openings per month since this draw has been in operation.

In the year gone by only emergency repairs and renewals to machinery and structurals have been made. General conditions of the whole of the wiring installation, control equipment, machinery, steel deck members and wooden decking and sidewalks became so bad that a general contract for this work was advertised and on November 8, 1941, the Mayor approved a contract with Marinucci Brothers & Co., the low bidder, for making certain general repairs to the draw.

Work was started at once, but by the end of the year only the removal of the wooden deck system had been accomplished. The nature of the work required under this contract is such that maintenance of deck traffic is impossible.

Warren Bridge.

This bridge, which is one of the oldest, is built on wooden trestle bents. At the draw there is a water pipe crossing and originally there was a storehouse used by the department for keeping large spare parts for various drawbridges and some patterns for castings. On June 27 a fire destroyed this storehouse, burned the pile and trestle support of the water pipe putting the water pipe out of commission and did some damage to the bridge; the fire apparently started on the pipe trestle where trespassers sometimes gather in numbers.

For some time the deck of the fixed spans near the draw on the Charlestown side showed increasing weakness and the piling at the draw crack became so weak due to rotting that repairs and renewals were necessary to keep the draw in commission and to safeguard the vehicles crossing the bridge.

After advertising, the Acting Mayor, William J. Galvin, approved a contract with Berke-Moore Com-

pany, the low bidder, for driving the necessary new piles, installing new timber work and repaving the roadway near the draw.

Work under this contract was not completed at the end of the year.

Various Bridges.

Due to a general condition of the decks and wearing surfaces of a number of bridges it was deemed advisable to draw up a general project to make the needed repairs. The following bridges were included:

Allston Bridge, Cambridge street, over the Boston & Albany Railroad, Allston.

Boston Street, over New York, New Haven & Hartford Railroad, South Boston.

Broadway Bridge, over Boston & Albany Railroad, City Proper.

Byron Street, over Boston, Revere Beach & Lynn Railroad, East Boston.

Central Avenue, over Neponset river, Dorchester.

Cummins Highway, over New York, New Haven & Hartford Railroad, Mattapan.

Dorchester Avenue, over New York, New Haven & Hartford Railroad, South Boston.

Dover Street, over Fort Point channel, South Boston.

Jones Avenue, over New York, New Haven & Hartford Railroad, Dorchester.

Milton Lower Mills, over Neponset river, Ashmont.

Milton Street, over New York, New Haven & Hartford Railroad, Hyde Park.

Northern Avenue, Bridge Draw House, over Fort Point channel, City Proper.

Redfield Street, over New York, New Haven & Hartford Railroad, Neponset.

Southampton Street, over New York, New Haven & Hartford Railroad, South Boston.

Toll Gate Way Footbridge, over New York, New Haven & Hartford Railroad, Forest Hills.

West Fourth Street, over New York, New Haven & Hartford Railroad, South Boston.

On September 2, 1941, the Mayor approved a contract with Martin Kelly, the low bidder, for making the repairs to the deck systems of these bridges. Work started at once in the field but the contract was not completed at the end of the year.

*Boston and Cambridge Bridges Commission.**Longfellow Bridge.*

For some time it was known that certain steel repairs to the structurals of this bridge were indicated due to local corrosion from surface drain of the bridge and from the junctures of the Boston Elevated Railway and the two outside roadways.

Bids for this work were invited by the Boston and Cambridge Bridge Commissioners and on November 26, 1941, the Acting Mayor of Boston, Mr. William J. Galvin, and the Mayor of Cambridge, Mr. Francis L. Sennott, approved a contract with the J. A. Singarella Company, the low bidder, to make the needed repairs.

Work started at once on the contract, but at the end of the year only a small part of the wooden staging had been erected.

HIGHWAY DIVISION.

Parsons Street Footway.

Parsons street, Brighton, which is 50 feet wide, passes under the Boston & Albany Railroad tracks at its end near the Charles river. At this railroad bridge the street is constricted to 20 feet in width and without provisions for a sidewalk. While this condition has existed for many years it was relatively recently that the increase in the number of vehicles and pedestrians passing indicated the necessity for making an effort to safeguard the latter.

After a consideration of the condition generally, it was decided that a new bridge with 50 feet clear between abutments was not required but that a footway 7 feet in width would be sufficient.

To build this footway along the back of the easterly abutment of the railroad bridge, the Mayor on October 25, 1941, approved a contract with the V. J. Grande Company, the low bidder. One of the requirements of the contract is that the train service of the Boston & Albany Railroad must be maintained; this provision necessitated close cooperation between the excavating by the contractor and the bracing and supporting of the rails of the railroad which is entirely supervised and accomplished by the Boston & Albany Railroad.

Work started under this contract at once but by the end of the year only the excavation and a small part of the concrete work had been completed.

Snow Dump.

The contract with W. H. Ellis & Sons Company for building a wooden pier from the foot of Battery street out to the Old Harbor line as a snow dump was completed February 17, 1941, at a cost of \$27,362.

Day Labor Force.

The day labor force patched and replaced deck sheathing, headers and sidewalk planking on the various bridges; repaired platforms, refastened treads, cleaned and painted drawhouses and shelter houses; made repairs to drawhouses and controller houses; added to and deducted from counterweights; repaired steps; removed snow and ice from bridges and sanded same; repaired piers; painted fences and gates; did general carpenter work and painting and made mechanical repairs, etc.; repaired wood block paving, refastened treads on various bridges; repaired and rebuilt gates at various bridges; repaired floats; built and repaired sand boxes, rebuilt coal bins at various bridges; repaired boats; set glass at various drawhouses; painted lockers at drawhouses; made miscellaneous small repairs at various bridges, etc.

The maintenance force, together with Welfare men, cleaned the bridge sidewalks and steps in the intown areas of snow and other refuse during the entire year. Electrical and machinery maintenance was taken care of by the electricians and machinists.

Another duty of this division during the winter months was the supervising and inspecting of snow loading and removal from snow area No. 3, in common with other divisions of the department. This work was done under contract.

In the course of the year part of the activities of the office force were taken up in work for other divisions and departments of the city. While these efforts, spread over the entire period, did not require a considerable amount of time, the nature of the work was of an advisory and investigating nature.

FERRY SERVICE.

The following ferryboats are in commission:

NAME.	When Built.	Length.	Gross Tons.
Charles C. Donoghue.....	1926	174 feet, 4 inches	756.77
Daniel A. MacCormack.....	1926	174 " 4 "	756.77
Ralph J. Palumbo.....	1930	174 " 4 "	779

All these boats are of the propeller type and are all steel boats.

The work of this service for the year consisted of the following:

Ferryboat "Daniel A. MacCormack."

Following the policy of the city to clean, paint and complete general repairs to its boats at the time of the running out of the "ships papers," a contract was drawn up to do this work on the "MacCormack." After advertising, the Mayor approved a contract with the Quincy Dry Dock and Yacht Corporation on October 7, 1941, to clean and paint the ship and make specified repairs to the hull system and machinery. Included in the machinery repairs was the rebabbitting, scraping and fitting of four main crank pin boxes and four main bearings. After work had started, and as hidden conditions were opened up, the United States Steam Boat Inspection Service required the renewing of thirty-four boiler mounting studs, the installing of stack stiffeners and a new stack damper. At this time it may be noted that the increased cost of materials and labor have resulted in a sharp rise in contract quotations; it may be noted further that the obtaining of materials becomes more difficult, due to the National Emergency causing protracted delays in completing even small repairs.

Work under this contract was completed on November 25, 1941, at a cost of \$13,275.97.

Ferryboat "Ralph J. Palumbo."

With the expiration of the "ships papers," a contract was drawn up to clean and paint the hull and superstructure and to make necessary repairs to the ship, main engine and auxiliaries.

On April 28, 1941, the Mayor approved a contract with the Quincy Dry Dock and Yacht Corporation to make the necessary repairs, etc. Included in the work done on the machinery was the rebabbitting and fitting of the main engine crossheads, and new crosshead brasses, new 8-inch back pressure valve, re boring of one high and one low pressure cylinder, re boring of cages and fitting of new valves of the six piston valves, the rebabbitting of four crank pin boxes and four main bearings, the cleaning of the boilers for United States Steam Boat Inspection Service examination, new furnace front of boilers, furnishing of two new flue dampers, main stop and blow-down valves of boilers overhauled, the ventilating blower and turbine overhauled and a new hand fire pump installed.

Work under this contract was completed on June 23, 1941, at a cost of \$13,856.90.

Department Force.

During the year machinists, carpenters, painters, riggers and electricians, who are included in the personnel of the Ferry Service, made all repairs possible to the plant to the extent of equipment at their disposal. This work consisted mainly of minor repairs to the machinery on the boats, repairs to ferry bridge machinery, ferry bridge roadways and headhouse repairs in general.

SUMNER TUNNEL.

Summary of Work During 1941.

Administration Building.—A night depository head was installed in the cashier's vault to receive the toll-man's deposits. The yearly inspection of combinations, delayed locks, deposit box mechanisms and safes by the Diebold Safe and Lock Company found all to be operating properly.

Ventilation Buildings.—A new shop and storage for lamps was built on the fourth floor of the Boston Ventilation Building.

Two partitions were erected in the East Boston Ventilation Building for a storeroom and a shop.

Tunnel General.—All catch-basins, drop inlets and pump-room sumps were cleaned twice. Tunnel walls, roadway and ceilings are cleaned two or three times a

month. Repairs to the tunnel roadway were made as needed. All cleaning and repair work is done after 12 o'clock midnight and with no interference to traffic.

Power.—The power supply is received from the Boston Edison Company at 13,800 volts and is transformed to lower voltages for use on fan and pump motors, heating, lighting, elevators, motor-generators and toll registering equipment.

	1938.	1939.	1940.	1941.
Total kilowatts.....	2,843,914	2,965,340	3,091,410	3,177,004
Total vehicles.....	5,543,302	5,936,007	6,309,524	7,362,848

Circuit Breakers, Oil and Air Types.—Oil tested and changed or added to as needed. Operation tested and adjustments made as required.

Transformers.—Tested oil and changed and added oil as required.

Protective Relays.—Tested, adjusted and set protective relays.

Ventilation Fans, Motors and Dampers.—All fans, motors and dampers cleaned and painted and repairs and adjustments made as required. Motor controllers cleaned and necessary adjustments made.

Motor-Generators and Emergency Storage Batteries.—The four motor-generators have been painted and the commutators undercut and stoned. Emergency storage batteries are inspected and charged at regular intervals. A semi-annual inspection by the Philco Storage Battery Company shows these batteries to be in good condition.

Pumping Equipment.—All harbor and portal pumps have been overhauled and painted and are in first class operating condition.

Traffic Signals.—Relay panels have been cleaned and broken glass in signal units has been replaced as needed.

Carbon Monoxide Equipment.—All equipment is calibrated, adjusted and inspected and chemicals changed in accordance with a definite schedule.

Telephone System.—Minor adjustments of relays and replacements of induction coils and defective cords as required.

Toll Registering Equipment.—All registers and key boxes are in good working condition and are under supervision at all times. Monthly insulation resistance

and pressure tests are made on all treadles and any treadles showing faults are removed and repaired.

Fire Protection.—The yearly inspection of fire extinguishers has been made and all used extinguishers have been recharged.

Fires.—There were three minor fires in the tunnel during 1941, but there was no damage to the tunnel.

BOOTH RED SIGNAL.	1938.	1939.	1940.	1941.
Booth Red on.....	13 times	6 times	16 times	6 times
Total duration.....	77 minutes	52 minutes	113 minutes	45 minutes

Garage Service.—During the past year there were ninety-seven towing jobs.

	1938.	1939.	1940.	1941.
Tow jobs.....	341	288	189	97

VEHICULAR TRAFFIC.

	1938.	1939.	1940.	1941.
Totals.....	5,543,302	5,936,007	6,309,524	7,362,848
Monthly average.....	461,942	494,667	525,793	614,000
Weekly average.....	106,602	114,154	121,337	141,700
Daily average.....	15,187	16,263	17,293	20,180

Personnel.—During 1941 there were the following changes in personnel:

Four tollman-guards promoted to sergeant-tollman-guard.
 Two tollman-guards transferred.
 Two tollman-guards appointed.
 One stenographer-clerk resigned.
 One clerk appointed.
 Two clerk-typists appointed.
 One electrician-operator appointed.
 One chauffeur-laborer transferred.
 One chauffeur-laborer resigned.
 One chauffeur-laborer appointed.
 One chauffeur-laborer-rigger died.

Yours respectfully,

THOMAS H. SEXTON,
Division Engineer.

BRIDGE SERVICE.

FINANCIAL STATEMENT, 1941.

Expenditure from Maintenance Appropriation.

Boston bridges	\$399,594 62	
Boston and Cambridge bridges	4,854 92	
	<hr/>	\$404,449 54

Total Expenditures.

From maintenance appropriation	\$404,449 54	
From special appropriations	153,839 65	
	<hr/>	\$558,289 19

Expenditures on Boston Bridges.

Administration:

Division engineer	\$3,000 00	
Engineers and draughtsman	33,745 71	
Clerks	4,813 95	
Inspectors	3,617 02	
Foreman	2,500 25	
Blue printers	2,300 00	
Injured employees	53 00	
Veterans' pensions	1,675 00	
	<hr/>	\$51,704 93
Printing, postage and stationery,	\$1,300 73	
Travelling expense	18 60	
Telephone	3 65	
Engineers' instruments (new and repaired)	63 42	
Office supplies	40 10	
Inspection of typewriters	24 00	
Binding	12 65	
	<hr/>	1,463 15
		<hr/>
		\$53,168 08

Yard and Stockroom:

Yard:

Clerk, yardman and watchmen,	\$9,095 62
Holiday and vacation	3,367 71
Travelling expense	322 50
Tools, new and repaired	412 45
Supplies	825 14
Telephone	149 70
Other services	2,471 61
Repairs	334 52
Auto equipment	10,472 16

\$27,451 41

Stockroom:

Stock purchased	\$16,354 96
Stock used	15,860 88

Increase in stock 494 08

\$27,945 49*Tidewater Bridges, 1941.*

BRIDGES.	Drawtenders' Salaries.	Mechanics' Wages.	Material.	Repair Bills.	Supplies.	Totals.
Broadway	\$12,973 18	\$622 56	\$658 24	\$244 28	\$299 82	\$14,798 08
Charlestown.	25,712 76	2,551 08	1,796 78	332 12	597 82	30,990 56
Chelsea North.	19,544 82	1,378 58	309 79	573 97	1,224 81	23,031 97
Chelsea South.	15,019 64	766 40	76 36	947 79	546 61	17,356 80
Chelsea Street.	19,988 85	1,425 06	239 59	374 63	537 17	22,565 30
Congress Street	15,946 43	1,302 71	372 58	165 45	494 04	18,281 21
Dorchester Avenue	15,107 10	602 83	622 49	209 58	220 99	16,762 99
Dover Street.	13,659 10	1,184 93	1,065 74	535 39	226 24	16,671 40
L Street *.	15,472 27	1,839 18	1,010 19	543 24	777 64	19,642 52
Malden.	19,411 36	1,785 67	1,727 19	790 20	551 23	24,265 65
Meridian Street.	19,665 52	2,224 72	643 97	1,080 18	485 22	24,099 61
Northern Avenue.	18,752 63	2,150 59	2,919 57	825 83	3 240 75	27,889 37
Summer Street.	19,223 06	1,351 39	240 56	606 50	370 37	21,791 88
Warren.	16,081 51	1,882 14	1,813 39	1,906 71	357 91	22,041 66
Totals.	\$246,558 23	\$21,067 84	\$13,496 44	\$9,135 87	\$9,930 82	\$300,189 00

* Now Summer Street, over Reserved Channel.

Repairs on Inland Bridges.

BRIDGES.	Labor and Material.
B Street stairs	\$41 75
Beacon Street, over Outlet	61 33
Beacon Street, over New York Central Railroad	7 00
Blakemore Street	166 14
Blue Hill Avenue	1,669 22
Boston Street	321 88
Bennington Street	163 56
Boylston Street, over New York Central Railroad	128 83
Braddock Park-Follen Street	148 01
Broadway, over New York Central Railroad	537 28
Broadway, over New York, New Haven & Hartford Railroad	13 66
Butler Street	34 25
Byron Street	168 28
C Street stairs	167 43
Central Avenue	145 43
Camden Street-Gainsborough Street	48 47
Clarendon Street	29 69
Cummins Highway	45 00
Dana Avenue	406 60
Dartmouth Street (Rent)	300 00
Dorchester Avenue, over New York, New Haven & Hartford Railroad	699 98
Durham Street-West Rutland Square	24 80
Everett Street	777 78
Fairmount Avenue	385 78
Glenwood Avenue East	30 99
Gove Street (Foot)	15 46
Granite Avenue	122 18
Hyde Park Avenue, over Stony Brook	132 56
Hyde Park Avenue, over Mother Brook	9 34
Jones Avenue (Foot)	49 43
Longfellow	72 00
Massachusetts Avenue, over New York, New Haven & Hartford Railroad	45 50
Massachusetts Avenue, over New York Central Railroad	27 45
Milton Lower Mills	40 71
Milton Street	38 44
Mystic Avenue	40 78
<i>Carried forward</i>	\$7,116 99

Repairs on Inland Bridges.— Concluded.

BRIDGES.	Labor and Material.
<i>Brought forward</i>	\$7,116 99
New Allen Street	937 23
Old Harbor Village Footway	1,223 49
Parsons Street Footway	101 58
Public Landing, Northern Avenue	37 00
Perkins Street (Foot)	244 64
Redfield Street	429 69
Reservoir Road	50 54
River Street	88 15
Sprague Street	9 34
Southampton Street, over New York, New Haven & Hartford Railroad	440 09
Summer Street, over New York, New Haven & Hartford Railroad	529 53
Saratoga Street	60 40
Toll Gate Way (Foot)	45 25
Tremont Street	191 15
Webster Street	75 35
West Fourth Street	1,307 93
Winthrop	100 08
Cleaning bridges	3,631 17
Snow removal and sanding	1,672 45
Totals	\$18,292 05

SUMMARY.

Administration	\$53,168 08
Yard and stockroom	27,945 49
Tidewater bridges	300,189 00
Inland bridges	18,292 05
	\$399,594 62
Boston and Cambridge bridges	4,854 92
Total	<u>\$404,449 53</u>

BRIDGES, REPAIRS, ETC.

B Street stairs:		
Repair steps		\$207 07
Beacon Street, over New York Central Railroad:		
Maurice M. Devine, Inc.	\$22 50	
Flagman services	85 28	
Repair concrete sidewalk	124 71	
		232 49
Broadway Bridge:		
Repair fence	\$151 01	
Repairs to machinery	172 51	
		323 52
Brookline Avenue Bridge:		
Maurice M. Devine, Inc.	\$113 62	
Flagman services	206 09	
		319 71
Charlestown Bridge:		
Repairs to machinery	\$359 16	
Electrical repairs	34 40	
Blacksmith work	148 19	
		541 75
Chelsea North Bridge:		
Repairs to machinery	\$232 77	
Electrical repairs	27 25	
Blacksmith work	56 48	
		316 50
Chelsea South Bridge:		
Repairs to barriers	\$631 17	
Electrical repairs	31 00	
Blacksmith work	67 50	
		729 67
Chelsea Street Bridge:		
Repairs to approaches		989 00
Congress Street Bridge:		
Electrical repairs	\$71 47	
Blacksmith work	7 93	
		79 40
Dartmouth Street Bridge:		
Maurice M. Devine, Inc.	\$226 46	
Flagman services	326 89	
		553 35
Dorchester Avenue Bridge:		
Repairs to foundation	\$792 05	
Repairs to machinery	908 86	
Electrical repairs	326 86	
Blacksmith work	35 26	
		2,063 03
Dover Street Bridge:		
Repairs to machinery	\$100 54	
Electrical repairs	388 09	
Advertising	12 00	
		500 63
Carried forward		\$6,856 12

<i>Brought forward</i>		\$6,856 12
Fairmount Avenue Bridge:		
Blacksmith work		38 00
Gove Street Bridge:		
Repairs to fence		310 47
Malden Bridge:		
Repairs to machinery	\$21 00	
Blacksmith work	19 20	
		40 20
Massachusetts Avenue Bridge, over New York Central Railroad:		
Repairs to abutments		709 51
Meridian Street Bridge:		
Repairs to machinery	\$1,958 75	
Electrical repairs	69 16	
Material	321 93	
Blacksmith work	34 50	
		2,384 34
Northern Avenue Bridge:		
Repairs to machinery	\$266 51	
Repairs to oil burner	14 50	
Electrical repairs	58 71	
Blacksmith work	3 37	
		343 09
Perkins Street Bridge — Foot:		
Repairs to fence		91 23
River Street Bridge, Hyde Park:		
Repairs to blast plates	\$448 00	
Flagman services	43 05	
		491 05
Summer Street Bridge, over Fort Point Channel:		
Repairs to machinery	\$340 88	
Repairs to heater	33 43	
Rental of crane	77 38	
Blacksmith work	16 48	
		469 17
Summer Street Bridge, over Reserved Channel:		
Repairs to machinery	\$1,473 25	
Repairs to foundation	737 84	
Repairs to plumbing	24 15	
Blacksmith work	37 01	
		2,272 25
Warren Bridge:		
Machinery repairs	\$2,856 71	
Repairs to girders	146 49	
Blacksmith work	21 43	
Electrical repairs	201 49	
Tear down burnt building	125 00	
		3,351 12
Webster Street Bridge:		
Repair fence		240 40
		<u>\$17,596 95</u>

BRIDGES — CONSTRUCTION OF.

Allston Bridge:			
Martin J. Kelly	\$2,423	08	
Advertising		2	43
Inspection of concrete		6	99
			<hr/>
			\$2,432 50
Boston Street Bridge:			
Martin J. Kelly	\$956	78	
Advertising		2	43
			<hr/>
			959 21
Broadway Bridge, over New York Central Railroad:			
Martin J. Kelly	\$3,127	01	
Advertising		15	81
Miscellaneous		24	37
Engineering	2,084	67	
			<hr/>
			5,251 86
Byron Street Bridge:			
Martin J. Kelly	\$429	34	
Inspection of concrete		2	69
Advertising		2	43
			<hr/>
			434 46
Charlestown Bridge:			
Material — paint	\$5,407	50	
Advertising		39	25
Miscellaneous		39	61
Engineering	751	76	
			<hr/>
			6,238 12
Central Avenue Bridge:			
Martin J. Kelly	\$948	19	
Advertising		2	42
			<hr/>
			950 61
Cummins Highway Bridge:			
Martin J. Kelly	\$452	63	
Inspection of concrete		4	65
Advertising		2	42
			<hr/>
			459 70
Dorchester Avenue Bridge, over New York, New Haven & Hartford Railroad:			
Martin J. Kelly	\$1,771	96	
Advertising		2	42
			<hr/>
			1,774 38
Dover Street Bridge:			
A. Orlando, Inc.	\$17,016	66	
Martin J. Kelly	7,771	51	
Advertising		2	42
Miscellaneous		24	37
Engineering	396	99	
			<hr/>
			25,211 95
Harrison Avenue Bridge:			
Martin J. Kelly	\$545	76	
Inspection of concrete		10	85
			<hr/>
			556 61
Jones Avenue Bridge:			
Martin J. Kelly	\$3,940	49	
Advertising		2	42
Engineering	176	44	
			<hr/>
			4,119 35
Carried forward			
			<hr/>
			\$48,388 75

<i>Brought forward</i>		\$48,388 75
Longfellow Bridge:		
Engineering	\$1,221 60	
Advertising	6 63	
		1,228 23
Malden Bridge:		
Diver services	\$220 00	
Advertising	13 38	
Miscellaneous	24 38	
Engineering	1,182 50	
		1,440 26
Meridian Street Bridge:		
Advertising	\$12 75	
Engineering	1,570 61	
		1,583 36
Milton Street Bridge:		
Martin J. Kelly	\$995 10	
Inspection of concrete	15 80	
Advertising	2 42	
		1,013 32
Milton Lower Mills Bridge:		
Martin J. Kelly	\$1,041 02	
Inspection of concrete	13 75	
Advertising	2 42	
		1,057 19
Northern Avenue Bridge:		
Martin J. Kelly	\$1,140 43	
Advertising	2 42	
		1,142 85
Redfield Street Bridge:		
Martin J. Kelly	\$2,379 42	
Inspection of concrete	3 29	
Advertising	2 42	
		2,385 13
Southampton Street Bridge:		
Martin J. Kelly	\$1,518 19	
Advertising	2 42	
		1,520 61
Summer Street Bridge, over Reserved Channel:		
Diver services	\$300 00	
Engineering	1,651 20	
		1,951 20
Summer Street Bridge, over Fort Point Channel:		
Repair bridge truck		700 00
Toll Gate Way Bridge:		
Martin J. Kelly	\$489 64	
Advertising	2 42	
Engineering	176 44	
		668 50
West Fourth Street Bridge:		
Martin J. Kelly	\$1,860 65	
Advertising	2 42	
Engineering	44 11	
		1,907 18
Warren Bridge:		
Berke-Moore Company	\$13,898 69	
Advertising	26 13	
Miscellaneous	24 38	
Engineering	1,775 02	
		15,724 22
		<u>\$80,710 80</u>

PUBLIC WAYS — CONSTRUCTION OF.

Parsons Street Footway:

Material	\$1,998 82
Trucking steel	68 00
Flagman services	19 94
Engineering	201 62

\$2,288 38

WORK RELIEF PROGRAM.

Blue Hill Avenue Bridge:

Material — lumber and nails	\$10,338 15
Concrete	39 00
Bituminous top	997 84
Inspection test of concrete	1 00
Tools	173 06
Fuel	33 25
Travelling expense	25 00
Blacksmith work	126 05
Telephone	4 10
Miscellaneous	10 86

 \$11,748 31

Everett Street Bridge:

Material — lumber and nails	\$8,096 13
Wood preservative	171 60
Fuel	45 60
Blacksmith work	48 40
Tools	159 68
Flagman services	35 53
Travelling expense	4 05
Miscellaneous	28 75

 8,589 74

Dorchester Avenue Bridge:

Wire rope	56 21
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Old Harbor Village Footbridge:

Material — lumber and nails	\$4,173 69
steel	10,437 82
paint	687 36
concrete and cinders	340 53
Truck rental	1,200 00
Caisson equipment rental	2,145 62
Testing concrete cylinders	99 00
Tools	1,451 16
Blacksmith work	124 14
Fuel	209 63
Inspection of steel	105 35
Erection of steel	1,853 75
Erection of fences	1,175 89
Repairs to heater	22 94
Travelling expense	43 26
Telephone	68 77
Relocating lamp	173 13
Electrical material	4 28
Miscellaneous	552 94

 24,869 26

 * \$45,263 52

* This also includes \$6,876.75 balance in Item H, Bridge Service budget from 1940.

SUMMARY.

Expenditures from Special Appropriations.

	Balances from 1940.	Total Credits, Including Balances Carried Over and Transfers.	Expended, During Year 1941.	Unexpended Balances December 31, 1941.
Bridges, repairs, etc.....	\$8,278 79	\$18,777 99	\$17,596 95	\$1,181 04
Bridges, construction of.....		650,373 39	80,710 80	569,662 59
Bridges, reconstruction and repair of P. W. A.....	11,852 77	11,852 77	* 8,000 00	3,852 77
Work Relief Program.....	6,876 75	45,676 75	† 45,263 52	413 23
Public ways, construction of Parsons Street Footway..			‡ 2,886 58	.....
Totals.....	\$27,008 31	\$726,680 90	\$154,457 85	\$575,109 63

* \$8,000 expended for retirement of debt.

† Includes \$6,876.75 from Item H, Bridge Service.

‡ See also Highway Service.

Draw Openings, 1941.

BRIDGES.	STEAMERS.			SAILING VESSELS.			TUGS.			BARGES.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Total Number of Cargoes.	Total Number of Openings.
	Day.	Night.		Total.	Day.	Night.		Total.	Day.	Night.		Total.	Day.	Night.		Total.				
Broadway.....				31	3	34	579	29	608	89	13	102	377	2	379	1,076	47	1,123	246	608
Charlestown				18	2	20	519	381	900	162	92	254	520	480	1,000	1,219	955	2,174	573	703
Chelsea North.....	1,239	159	1,398	11		11	8,363	2,058	10,421	1,779	976	2,755	820	90	910	12,212	3,283	15,495	827	6,404
Chelsea South.....	36	28	64	2		2	1,783	470	2,253	89	39	128	903	232	1,135	2,813	769	3,582	1,025	1,225
Chelsea Street.....	275	178	453				1,976	1,038	3,014	798	789	1,587	119	27	146	3,168	2,077	5,245	1,012	2,893
Congress Street	108	16	124	19	1	20	1,280	88	1,368	234	32	256	794	37	831	2,435	174	2,609	468	1,590
Dorchester Avenue.....				19	1	20	595	21	616	88	9	97	472	36	508	1,174	36	1,210	255	690
Dover Street.....				37	4	41	588	22	610	87	10	97	374	1	375	1,086	37	1,123	258	614
L Street*.....				256	67	323	354	148	502	607	147	754	928	356	1,284	2,145	718	2,863	256	2,372
Malden	102	53	155				931	267	1,198	317	165	482	364	149	513	1,714	634	2,348	335	1,525
Meridian Street.....	835	295	1,130	4	1	5	5,730	1,545	7,275	2,438	1,316	3,754	4,853	895	5,748	13,860	4,052	17,912	2,149	10,344
Northern Avenue	73	58	131	45	14	59	2,128	363	2,491	217	54	271	1,487	312	1,799	3,950	801	4,751	799	2,770
Summer Street.....	72	47	119	21		21	1,113	242	1,355	204	48	252	684	73	757	2,094	410	2,504	514	1,467
Warren				10		10	490	396	886	275	136	411	1,541	820	2,361	2,316	1,352	3,668	590	2,290
Totals	2,740	834	3,574	473	92	565	26,429	7,068	33,497	7,384	3,816	11,200	14,236	3,510	17,746	51,262	15,345	66,607	9,307	35,295

* Now Summer Street over Reserved Channel.

GRANITE AVENUE BRIDGE.*

Drawtenders' salaries	\$2,796 83
Material	16 33
Repairs	6 60
Supplies	57 27
	<u>\$2,877 03</u>

* One half paid by County of Suffolk and one half by town of Milton.

Granite Avenue Bridge Draw Openings.

	SAILING VESSELS.			ALL OTHERS.			TOTAL NUMBER OF VESSELS.			Total Number of Cargoes.	Total Number of Openings.
	Day.	Night.	Total.	Day.	Night.	Total.	Day.	Night.	Total.		
Openings*	52	35	87	208	97	305	260	132	392	.....	389

* Does not include expenditures for H, Relief Projects.

FERRY SERVICE.

FINANCIAL STATEMENT FOR THE YEAR ENDING
DECEMBER 31, 1941.

1. Receipts.

Total cash receipts during the year	\$22,748 27
Cash in hands of tollmen at beginning of year,	125 00
	<u>\$22,873 27</u>
Cash paid over to City Collector	\$22,748 27
Cash in hands of tollmen December 31, 1941 .	98 43
Cash lost in fire at Ferry Headhouse April 8, 1941	26 57
	<u>\$22,873 27</u>

2. Appropriations and Expenditures.

Received from annual appropriations for Ferry Service	<u>\$219,374 23</u>
--	---------------------

3. Result of Operation for the Year.

Receipts for the year (net income)	\$22,748 27
Ordinary expense (maintenance appropriations)	\$241,602 39
Interest paid on ferry debt	6,282 50
Decrease in valuation of supplies,	562 26
Depreciation on ferryboats	44,398 96
Money lost in fire	26 57
Total	<u>\$292,650 98</u>
Increase in value of machinery and tools	221 70
Net outgo for year	\$292,429 28
Net loss for the year	<u>* \$269,681 01</u>

* Does not include expenditures for H, Relief Projects.

Balance Sheet, End of Fiscal Year, December 31, 1941.

ASSETS.	LIABILITIES.
AVAILABLE ASSETS:	CURRENT LIABILITIES:
Cash in hands of tollmen at close of year....	\$98 43
Inventory of Supplies, viz.:	16,302 72
Supplies for maintenance.....	782 00
Rents receivable.....	325 00
Damages receivable.....	
CONTINGENT ASSETS:	CONTINGENT LIABILITIES:
City Treasurer (Relief Appropriation).....	973 07
FIXED ASSETS:	FIXED LIABILITIES:
Real estate, land and buildings ¹	Capital of the City invested in the Ferries, viz.:
Ferryboats ³	Total expenditures of all kinds for eighty-
Machinery, tools, etc.,.....	four years, including interest on Ferry
Total tangible assets.....	Debt..... \$27,978,464 38
Deficiency or loss by operations and main-	Less total receipts..... 9,007,971 75
tenance of the Ferries for eighty four-years	
to date.....	18,970,492 63
\$18,971,465 70	\$18,971,465 70

¹ Original purchase.

New buildings, drops, slips, cost to 1913.....

Land, Lincoln's Wharf, cost to 1867.....

Land, Battery Wharf, cost to 1893.....

New drops, both ferries, cost from 1923 to

December 31, 1941.....

² Assessors' figures.³ Total cost to date, per Ferry books.....

Less boats sold, depreciated or destroyed.....

\$2,529,820 50

2,237,787 31

\$292,033 19

Balance Sheet for Year 1941.

<i>Assets.</i>	
Cash, tollman's capital	\$98 43
Rents receivable	782 00
Supplies in stock	16,302 72
Ferryboats (less depreciation)	292,033 19
Machinery and tools	2,937 00
Real estate, land and buildings (assessors' valuation)	466,100 00
Damages receivable	325 00
City Treasurer (relief appropriation)	973 07
Total	\$779,551 41
Cost of avenues, etc., East Boston (previous to 1871)	* 315,815 68
Deficiency of assets (less)	17,876,098 61
Total	<u>\$18,971,465 70</u>

<i>Liabilities.</i>	
Capital invested by City of Boston to date	\$18,970,492 63
Appropriation H, Relief Project balance	973 07
Total	<u>\$18,971,465 70</u>

Details of Capital Invested by the City of Boston.

Total expenditures to date per ferry books	\$27,563,273 03
Interest of debt for the year (per City Auditor's reports)	6,282 50
Interest previous years, etc., (net debits, per City Auditor's reports)	408,908 85
Total expenditures	\$27,978,464 38
Deduct total receipts paid to City Collector	9,007,971 75
Excess expenditures, capital	<u>\$18,970,492 63</u>

COMPARISON OF RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

<i>Receipts.</i>	
From foot passengers (tollmen)	\$11,474 90
From team tickets (office sales)	159 20
From strip team tickets (tollmen)	1,789 60
From cash for teams (gatemen)	† 8,937 99
From gatemen's refunds	102 46
Total from rates	\$22,464 15
From rents	199 17
From other sources	84 95
Ordinary receipts	<u>\$22,748 27</u>

* Included in deficiency of assets in balance sheets.

† Includes cash fares from extra passengers on teams (gatemen).

Expenditures (Ordinary).

Office:

Division engineer's salary (part)	\$1,500 00
Clerk-assistant cashier	1,699 86
Clerk (part)	1,699 86
Retired veterans' pensions	6,912 42
Retired laborers' pensions	720 00
Stationery	100 62
Printing	440 10
Telephones	293 51
Advertising	20 25
Carfares	172 40
Postage	000 00
Premiums, surety companies	85 00

Total office expenses \$13,644 02

Ferryboats and landings:

Employees (wages)	\$150,391 17
Fuel	31,545 74
Teaming, weighing coal, etc.	2,745 00
Supplies	4,879 42
Gas	8 50
Oil	430 05
Electric light	1,110 65
Electric power	676 06
Repairs to boats	27,424 80
Repairs to buildings, drops and piers	3,562 52
Furnishings	26 40
Other expenditures	5,158 06

Total \$241,602 39

RECEIPTS, APPROPRIATIONS AND EXPENDITURES.

Expenditures from H, Relief Appropriation.

H, Relief Projects \$237 23

Total expenditures \$241,839 62

Appropriations.

Regular annual appropriations \$241,602 39

Total Expenditures Upon Ferries Since 1858.

Expenditures for avenues, paving, interest, etc., previous to the purchase of ferries by the city	\$444,101 30
Purchase of the ferries, April, 1870	276,375 00
Expenditures for ferryboats since April 1, 1870	2,530,009 81
Expenditures for new buildings, piers, drops, etc.	1,491,468 59
Expenditures for tools and fixtures (prior to 1910)	14,752 46
Expenditures for land for Lincoln's Wharf in 1887	5,562 52
Expenditures for land for Battery Wharf in 1893	10,000 00

Total expenditures on capital account	\$4,772,269 68
Expenditures for repairs of all kinds	3,092,326 67
Expenditures for fuel	3,263,609 45
Expenditures for salaries and wages	13,285,710 44
Expenditures for all other purposes	3,564,548 14

\$27,978,464 38

Total Receipts From Ferries Since 1858-59.

Receipts from rents, etc., previous to purchase of ferries,	\$29,588 56
Receipts from ferry tolls since purchase of ferries	8,667,134 42
Receipts from rents since purchase of ferries	74,041 57
Receipts from sale of ferryboats	168,004 57
Receipts from all other sources, per ferry books	38,592 78
Receipts from all other sources, per City Auditor	30,734 85
Total receipts from all sources	\$9,008,096 75
Less amount with tollmen as capital	98 43
Total receipts, Auditor's report	<u>\$9,007,998 32</u>

Regular Annual (Ordinary) Appropriations of the Ferry Service for the Year Ending December 31, 1941.

Unexpended balance, January 1, 1941	\$2,000 00
Appropriations (regular) for the year ending December 31, 1941	219,374 23
Transferred from Bridges Repairs, etc.	2,000 00
Transferred from Sanitary Service	550 00
Transferred from Paving Service	8,000 00
Transferred from Lighting Service	10,000 00
Transferred from Airport Transfer Account	9,600 00
Total	<u>\$251,524 23</u>
Amount of expenditures (regular) for the year	241,602 39
	<u>\$9,921 84</u>
Transferred to Sanitary Service	\$4,403 73
Transferred to Sewer Service	2,000 00
Transferred to City Treasurer	3,518 11
	<u>\$9,921 84</u>

H, Relief Appropriations.

Unexpended balance, January 1, 1941	\$1,210 30
Expenditures for the year	237 23
Unexpended balance, December 31, 1941	<u>\$973 07</u>

RECEIPTS OF SOUTH FERRY.

FROM TOLLMEN.	From Foot Passengers.	From Tickets.	Totals.
Boston side	\$5,900 14	\$1,469 20	\$7,369 34
East Boston side	5,574 76	320 40	5,895 16
Totals	<u>\$11,474 90</u>	<u>\$1,789 60</u>	<u>\$13,264 50</u>

From tollmen	\$13,264 50
From gatemen (cash for teams)	* 9,040 45
Total at South Ferry	† \$22,304 95
Tickets paid for at ferry office	159 20
Total in 1941 from rates	\$22,464 15
Rents for the year	82 50
Headhouse privileges	116 67
Old material sold	58 07
Care of public telephones	18 00
Commission on public telephones	8 88
Total	<u>\$22,748 27</u>

TRAVEL ON THE SOUTH FERRY FROM JANUARY 1, 1941
TO DECEMBER 31, 1941, INCLUSIVE.

Foot passengers at 1 cent 1,147,490

SOUTH FERRY.

Handcart, or wheelbarrow and man	5 cents	} 19,245
Horse and rider	5 cents	
Horse and cattle, each with attendant	5 cents	
One or two horse vehicle with driver	5 cents	
Motoreycle with driver	5 cents	
Trailer	10 cents	} 63,130
Three or four horse vehicle with driver	10 cents	
Passenger automobile with driver and one passenger	10 cents	
Passenger automobile with driver and more than one passenger	15 cents	} 18,737
Motor truck, six tons or less, with driver	15 cents	
Motor truck, six tons or over, with driver	20 cents	} 3,692
Auto bus with driver	20 cents	
Auto bus with driver and passengers	30 cents	000
Free vehicles		330

* Includes gatemen's refunds.

† Includes 1 cent cash fares from foot passengers for year.

SUMNER TRAFFIC TUNNEL.

1. RECEIPTS.

Financial Statement for the Year ending December 31, 1941.

Cash in hands of cashier at the beginning of the year	\$6,103 90
Received from tolls	\$1,110,270 60
Received from damages	735 19
Commission on telephone tolls	8 28
Total receipts	1,111,014 07
	<u>\$1,117,117 97</u>
Cash paid over to City Collector	\$1,110,428 47
Cash in hands of cashier December 31, 1941	6,689 50
	<u>\$1,117,117 97</u>

2. APPROPRIATIONS AND EXPENDITURES.

Received from annual appropriation	\$266,397 00
Transferred to City Treasurer	33,594 38
Total expenditures for the year	* \$232,802 62

3. RESULT OF OPERATION FOR THE YEAR.

Ordinary expenses (maintenance appropriation)	\$232,802 62
Interest paid on tunnel debt	831,400 00
Sinking Fund requirements	204,981 00
Net outgo for the year	\$1,269,183 62
Receipts for the year (net income)	1,110,428 47
Net deficit for the year	† \$158,755 15

* Includes \$40.97 carried forward to pay 1941 outstanding bills.

† Does not include \$23.75 received from Boston Retirement Board.

SUMNER TRAFFIC TUNNEL.

ANNUAL TRAFFIC BY CLASSIFICATION FOR YEAR 1941.

CLASSIFICATION AND RATE.

	No. 1, 15 Cents, Truck.	No. 2, 15 Cents, Pleasure Car.	No. 3, 15 Cents, Motor- cycle.	No. 4, 25 Cents, Truck.	No. 5, 20 Cents, Private Car and Trailer.	No. 6, 25 Cents, Truck.	No. 7, 20 Cents, Tractor and Trailer.	No. 8, \$1.00, Truck.	No. 9, 25 Cents, Buses.	Free Vehicles.	Total.
January.....	25,800	353,723	68	1,652	157	544	4	14	15,568	5,224	402,754
February.....	22,734	379,035	80	1,390	140	375	6	27	13,964	4,953	422,704
March.....	26,935	421,860	99	1,968	167	492	4	50	15,791	5,382	472,748
April.....	28,462	490,308	172	2,219	272	386	4	55	15,405	6,224	543,507
May.....	30,547	621,762	227	2,418	356	410	4	71	15,926	8,482	680,203
June.....	31,215	680,106	320	2,152	438	483	11	21	15,229	10,362	740,337
July.....	32,049	732,723	410	2,135	431	505	5	14	15,088	10,735	794,095
August.....	31,137	707,032	381	1,831	503	390	4	16	15,410	10,013	766,717
September.....	32,120	595,016	384	2,020	448	400	5	16	14,950	11,091	656,450
October.....	30,087	605,762	318	1,833	312	402	3	26	15,250	13,701	667,694
November.....	26,321	545,751	175	1,642	288	390	3	34	14,482	11,037	600,123
December.....	27,818	552,885	173	2,155	240	691	6	33	15,357	16,158	615,516
Totals.....	345,225	6,685,963	2,807	23,415	3,752	5,468	59	377	182,420	113,362	7,362,848

Free Vehicles include City-owned cars, Red Cross, Army, Navy, State cars and ambulances.

**Comparison of Receipts, Expenditures, Interest and Sinking Fund Requirements,
1937 to 1941, Inclusive.**

	1937.	1938.	1939.	1940.	1941.
Expenditures (ordinary).....	\$229,385 86	\$218,527 98	\$221,276 68	\$229,635 64	\$232,802 62
Interest Requirements.....	830,078 33	851,452 50	\$37,773 75	832,123 75	831,400 00
Sinking Fund Requirements.....	202,967 00	204,268 00	204,352 00	204,131 00	201,981 00
Total expenditures.....	\$1,262,431 19	\$1,274,248 48	\$1,263,402 43	\$1,265,890 39	\$1,269,183 62
Receipts.....	808,951 81	836,379 57	898,356 82	960,365 16	1,110,428 47
Deficits.....	\$453,479 38	\$437,868 91	\$365,045 61	\$305,525 23	\$158,755 15

APPENDIX B.

REPORT OF THE DIVISION ENGINEER OF THE HIGHWAY DIVISION.

BOSTON, January 2, 1942.

To the Commissioner of Public Works.

DEAR SIR,—I submit the following report of the operations and expenditures of the Highway Division for the year ending December 31, 1941.

The Paving Service Maintenance Appropriation in the budget called for \$897,553.60. There was an unexpended balance of \$22,962.31 from 1940, making a total appropriation of \$920,515.91. The amount expended during the year was \$879,575.44. During the year transfers amounting to \$5,275 were made to this appropriation and transfers amounting to \$44,913.59 were made from this appropriation, leaving an unexpended balance of \$1,301.88 at the end of the year.

The following is a summary of the appropriation for Work Relief Program for the year 1941:

Original appropriation in the budget	\$600,000 00
Transfers from appropriation	\$46,800 00
Transfers to appropriation	15,000 00
Net transfers	31,800 00
Total credits for 1941	\$568,200 00
Total amount expended in 1941	557,868 89
Unexpended balance	<u>\$10,331 11</u>

As of January 1, 1941, the regular employees numbered 475 and on December 31, 1941, our personnel had decreased to 467.

The amount of money taken in through the Permit Office of the Paving Service was \$15,516.48. Of this amount \$12,432.23 was deposited with the City Col-

lector, and \$3,084.25 was billed to public service corporations. There are now on file in the Permit Office 1,515 bonds in amounts of one, three, four and twenty thousand dollars, covering the city against claims for damages, etc., through the use of permits.

The regular force of the Paving Service was employed as usual in the maintenance of all public streets, resurfacing and patching macadam pavements, patching all permanent pavements such as asphalt, granite block, etc., and taking care of all gravel, brick and artificial stone sidewalks.

Work was continued this year by the Federal Works Progress forces in the construction and reconstruction of streets, sidewalks and retaining walls.

Also the division has permanently constructed streets, with sidewalks, edgestones and roadway that were accepted by the Board of Street Commissioners and an assessment was made on the abutting owners. Under this arrangement fifty new streets were constructed.

Following is a statement of some of the more important street work performed this year:

Atlantic avenue, Causeway and Commercial streets were finished; the reconstruction of State street, from Merchants row to India street; the reconstruction of Boylston street and Huntington avenue, from Arlington to Exeter streets; the reconstruction of Berkeley street, from Tremont street to St. James avenue; the resurfacing of the Summer Street Bridge, one half of which was completed during the year; the reconstruction of Tremont street, from Hammond street to Roxbury Crossing; the reconstruction of Morton street, from Fairmount street to the railroad bridge; the reconstruction of Bennington street, from Porter to Prescott streets, and the construction of a footpath and steps on Monastery path, from Warren street to the monastery.

In order that an idea of money spent for the cost of this work may be had, please be advised as follows:

Highway Division Expenditures:

Labor	\$22,039 51
Materials, equipment, heat, light, etc.	558,791 69

W. P. A. Expenditures:

Labor	1,486,771 83
Non-labor	152,100 68

Grand total	<u>\$2,219,703 71</u>
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LIGHTING SERVICE.

The Lighting Service Appropriation of the Highway Division called for \$923,788. A transfer of \$10,000 was made to the Bridge Division and then the Lighting Service received an additional appropriation of \$23,500, making a grand total of \$937,288. Out of this \$935,646.16 was expended, leaving an unexpended balance of \$1,641.84.

Mazda lamps of 1,000 candle power were installed as follows: Beach street (1), Charles street (1), East Newton street (1), Harrison avenue (1), Huntington avenue (2), Massachusetts avenue (2), Shawmut avenue (1), City Proper: Blue Hill avenue (6), Dorchester: Centre street (1), Hampden street (4), Parker street (1), South Huntington avenue (1), Tremont street (13), Warren street (2), Roxbury: Dorchester street (1), Old Colony avenue (2), East First street (5), South Boston: Washington street (2), Arborway (2), West Roxbury.

Mazda lamps of 600 candle power were installed as follows: Cambridge street Traffic Island (1), Charlestown: Boylston street Traffic Islands (10), Dewey square Traffic Islands (2), Huntington avenue Traffic Islands and underpass (52), Lenox street Housing Area (6), Park square Traffic Islands (2), City Proper: Blue Hill avenue Traffic Islands (10), Columbia road Traffic Island (1), Spaulding square Traffic Island (1), Dorchester: Saratoga street Traffic Islands (4), East Boston: Centre street Traffic Islands (2), Dudley street Traffic Island (1), Parker street Housing Area (6), Roxbury street Traffic Island (1), St. Alphonsus street Housing Area (6), Smith street Housing Area (7), Ward street Housing Area (7), Roxbury: Rev. Richard A. Burke street Housing Area (4); East Ninth street Housing Area (4), Mercer street Housing Area (4), Old Harbor street Housing Area (1), South Boston: Belgrade avenue Traffic Island (1), Canterbury street (1), South street Traffic Island (1), West Roxbury.

Mazda lamps of 250 candle power were installed as follows: Allston street (1), Brighton: Franklin street (1), City Proper: Park street (1), Dorchester: Wabeno street (1), Schuyler street (1), Roxbury.

Mazda lamps of 80 candle power were installed as follows: Adair road (2), Cenacle road (1), Glenmont road (2), Perle street (1), Brighton: Mead street (1), Charlestown: Oxford terrace (1), Upton street (1), City

Proper; Beatrice street (1), Edna road (2), Maryknoll road (1), Rita road (3), Sagamore street (6), St. Brendan road (2), Savin Hill avenue (1), Dorchester; Teragram street (1), East Boston; Bircherof road (4), Braeburn road (3), Deforest street (6), Hallron street (7), Irwin avenue (2), Myopia road (5), Pinewood street (1), Wingate road (2), Hyde Park; Bower street (8), Brookledge street (6), Burr park (1), Comins terrace (1), Catawba street (2), Crawford street (1), Crestwood park (1), Harold street (1), Harrishof street (1), Hazelwood street (1), Hollander street (3), Homestead park (1), Homestead street (7); Howland street (7), Humboldt park (1), Hutchings street (12), Jewell place (1), Lansing street (1), Laurel street (1), Munroe street (10), Ottawa street (5), Pickering avenue (2), Ruthven street (6), Sherman street (4), Shetland street (4), Spring terrace (1), Sylvia place (1), Townsend street (5), Waumbeck street (1), Roxbury; Bonad road (1), Eastwood circuit (6), Gretter road (1), Mahler road (3), Morey road (2), Neponset avenue (1), Oakmere street (1), Patten street (1), Pond street (1), Powell street (1), Randall road (1), Sycamore street (1), Vincent road (2), West Roxbury.

Mazda fire alarm lamps were installed as follows: Columbia road (1), Massachusetts avenue (1), Morton street (1), Dorchester; Cabot street (1), Columbus avenue (2), Harrison avenue (1), Heath street (2), Highland street (1), Ruggles street (1), Thornton street (1), Tremont street (2), Walnut avenue (1), Westminster avenue (1), Roxbury.

Petitions and requests for new lamps received from citizens and officials, also complaints relative to the Lighting Service have been investigated and attended to. All streets in the underground district prescribed for the year have been inspected and necessary changes and additions have been made.

Respectfully,

WILLIAM T. MORRISSEY,
Division Engineer.

HIGHWAY DIVISION — PAVING SERVICE.

Work Done by Contract and by Works Progress Administration, 1941.

TYPE OF WORK.	W. P. A.	Contract.	Total.
Earth excavation.....	110,725 cubic yards.	57,054 cubic yards.	167,779 cubic yards.
Rock excavation.....	8,028 " "	2,891 " "	10,919 " "
Filling.....	4,844 " "	1,248 " "	6,092 " "
Old concrete base removed.....	10,234 square yards.	895 square yards.	11,129 square yards.
Edgestone set.....	38,097 linear feet.	50,708 linear feet.	88,805 linear feet.
Edgestone reset.....	38,173 " "	17,357 " "	55,530 " "
Granite block edgings.....	67 " "	892 " "	959 " "
Granite block hips.....	24,321 " "		24,321 " "
Granite blocks relaid.....	410 square yards.		410 square yards.
Concrete base.....	78,761 " "	57,875 square yards.	136,636 " "
Bituminous macadam base.....	61,119 " "	63,699 " "	124,818 " "
Bituminous concrete base.....	28,664 " "		28,664 " "
Bituminous concrete pavement.....	178,009 " "	117,382 " "	295,391 " "
Bituminous macadam pavement.....	1,660 " "	1,853 " "	3,513 " "
Concrete pavement.....	12,687 " "		12,687 " "
Asphalt pavement.....	11,122 " "	475 " "	11,597 " "
Artificial stone sidewalks.....	676,069 square feet.	346,701 square feet.	1,022,770 square feet.
Bituminous sidewalks, concrete.....	420,038 " "	1,187 " "	421,225 " "
Brick sidewalks.....	1,598 square yards.		1,598 square yards.
Artificial stone driveways.....		32,679 " "	32,679 square feet.
Dry walls erected.....	635 cubic yards.	177 cubic yards.	812 cubic yards.
Mortar walls erected.....	2,378 " "	122 " "	2,500 " "
Spike caps erected.....	3,080 linear feet.	316 linear feet.	3,396 linear feet.
Concrete wall erected.....		357 cubic yards.	357 cubic yards.
Ground water drain.....	305 " "	2,002 linear feet.	2,307 linear feet.
Covers reset.....	970 " "	794 " "	1,764 " "
Street signs.....		58	58
Loam spaces.....		1,563 square yards.	1,563 square yards.
Extra concrete.....		39 cubic yards.	39 cubic yards.
Artificial stone safety islands.....	5,587 square feet.		5,587 square feet.
Pipe rail fence.....		560 linear feet.	560 linear feet.
Reinforced steel.....		13,000 pounds.	13,000 pounds.

TABLE SHOWING LENGTH AND AREA OF PAVING ON ACCEPTED STREETS, CORRECTED TO JANUARY 1, 1942.

	LENGTH IN MILES.											AREA IN SQUARE YARDS.										
	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.	Sheet Asphalt.	Asphalt Concrete.	Granite Block.	Wood Block.	Plank on Bridges.	Brick.	Concrete.	Macadam.	Gravel.	Not Graded.	Totals.
Year 1940 Report.....	139.90	185.70	76.70	0.73	0.71	0.97	25.72	256.07	19.64	1.97	708.11	* 2,690,407	† 3,684,579	‡ 2,048,311	15,248	15,923	19,280	‡ 499,128	\$ 4,181,367	302,751	59,044	13,516,098
Per Cent.....	19.76	26.23	10.83	0.16	0.10	0.14	3.63	36.16	2.77	0.28	100.00	19.91	27.26	15.15	0.11	0.12	0.14	3.69	30.94	2.24	0.44	100.00
JANUARY 1, 1942.																						
City Proper.....	32.50	28.36	26.21	0.27	0.13	0.40	3.23	5.19	0.19	.....	96.48	662,286	647,816	601,003	3,748	3,750	6,685	104,113	81,924	1,371	.....	2,112,696
Charlestown.....	0.65	3.81	9.96	0.08	0.07	.....	1.07	7.01	0.01	0.01	22.67	9,614	60,201	244,876	2,011	1,999	.....	22,768	100,566	80	41	438,156
East Boston.....	3.82	10.45	5.19	0.01	0.05	0.04	1.08	15.06	0.74	0.04	36.48	85,272	212,609	124,333	325	777	771	35,891	327,219	15,002	865	803,064
South Boston.....	8.83	10.09	10.47	0.04	0.19	0.12	0.96	14.19	0.29	1.30	46.48	167,095	206,391	289,544	1,255	4,797	2,993	20,573	247,401	5,028	34,550	979,627
Roxbury.....	25.04	19.72	11.59	0.10	.....	0.14	6.76	29.75	0.84	.....	93.94	452,516	385,779	302,116	2,689	.....	3,352	112,563	438,676	11,176	61	1,708,928
West Roxbury.....	24.79	41.64	3.42	0.01	0.07	.....	5.35	63.68	1.81	0.32	141.09	453,019	771,400	156,109	210	1,380	.....	76,121	1,019,093	29,708	10,351	2,517,391
Dorchester.....	32.07	46.53	6.91	0.06	0.07	0.27	6.13	72.93	2.81	0.07	167.83	594,700	847,123	200,811	1,669	1,242	5,479	101,073	1,163,806	45,972	2,341	2,964,216
Brighton.....	11.40	31.48	0.63	.....	0.08	.....	2.28	16.26	1.19	.....	63.22	252,300	602,718	74,372	1,007	1,231	.....	45,368	273,502	18,087	2,820	1,271,405
Hyde Park.....	0.65	8.72	0.05	0.09	0.05	.....	0.65	23.51	7.47	0.24	41.43	15,347	193,108	8,652	1,488	747	.....	12,906	399,587	114,571	7,965	754,371
Total.....	139.75	200.80	74.43	0.66	0.71	0.97	27.51	247.58	15.35	1.98	709.74	2,692,149	3,927,145	1,197,816	14,402	15,923	19,280	531,376	4,051,774	240,995	58,994	13,549,854
Per Cent.....	19.69	28.29	10.49	0.09	0.10	0.14	3.88	34.88	2.16	0.28	100.00	19.87	28.98	14.74	0.11	0.12	0.14	3.92	29.90	1.78	0.44	100.00

TOTAL PUBLIC STREETS 709.74 MILES.

NOTE.— In the above table the city is subdivided substantially on the boundary lines between the districts as they existed when annexed to Boston. Territory annexed from Brookline is included in city proper.

* Of this amount 0.10 mile or 834 square yards is Biturock; and 0.03 mile or 537 square yards is Kyrock; and 0.00 mile or 310 square yards is Unionite.

† Of this amount 0.02 mile or 667 square yards is Amiesite; and 85.21 miles or 1,557,790 square yards is asphalt concrete; and 103.72 miles or 2,130,230 square yards is bitudithic; and 0.02 mile or 4,973 square yards is Colprovia; and 0.06 mile or 942 square yards is Filbertine; and 0.00 mile or 4,000 square yards is Hepburnite; and 0.00 mile or 3,903 square yards is Laykold; and 0.00 mile or 4,167 square yards is Macasphalt; and 0.21 mile or 5,200 square yards is Simasco; and 11.16 miles or 203,915 square yards is Topoka; and 6.67 miles or 35,444 square yards public alleys included in this table; 7.41 miles or 332,540 square yards public streets in charge of Park Department included in this table; 7.01 miles or 236,673 square yards public streets in charge of Commonwealth of Massachusetts included in this table. In addition to this table there are 1.76 miles or 8,576 square yards of accepted footways.

0.00 mile or 4,153 square yards is Warcolite; and 0.18 mile or 3,474 square yards is Carey Elastic asphalt plank; and 0.11 mile or 2,507 square yards is Flintkote asphalt plank; and 0.11 mile or 1,234 square yards is Johns-Manville asphalt plank.

‡ Of this amount 0.02 mile or 185 square yards is cobble; and 49.88 miles or 1,529,274 square yards is granite block paving on concrete base.

§ Of this amount 0.06 mile or 924 square yards is Blome granitoid concrete block.

¶ Of this amount 199.65 miles or 3,310,509 square yards is bituminous macadam.



YEARLY REPORT OF WORK DONE BY DEPARTMENT FORCES FOR 1941.

Brick sidewalks, laid and relaid	28,964 square yards.
Gravel sidewalks, relaid	49,915 square yards.
Granolithic sidewalks, laid (new)	20,692 $\frac{1}{2}$ square feet.
Granolithic sidewalks, relaid (old)	117,876 square feet.
Bituminous concrete sidewalks, laid and relaid	75,481 square yards.
Block gutters, laid	3,486 $\frac{1}{3}$ square yards.
Block paving, laid (roadway) granite	2,667 square yards.
Edgestone set (new)	3,523 $\frac{3}{4}$ linear feet.
Edgestone reset (old)	11,694 $\frac{1}{6}$ linear feet.
Macadam roadway, patched	141,273 square yards.
Macadam roadway, resurfaced	8,735 square yards.
Street cleaning	53,954 cubic yards.
Snow removal	187,614 cubic yards.

Objects of Expenditures from Maintenance Appropriation, Classified by Districts, from January 1, 1941, to December 31, 1941.

Districts.	Macadam Repairs.	Paved Street Repairs.	Removal of Snow.	Street Cleaning.	Edgestone, Sidewalk and Gutters Repaired.	Street Work Resurfacing.	Miscellaneous.	Total.
South Boston and Dorchester North.....	\$6,986 34	\$373 93	\$9,600 71	\$1,745 90	\$10,502 78	.....	.....	\$29,209 66
East Boston.....	6,594 17	158 07	4,408 23	1,647 55	7,362 29	\$207 23	.....	2,377 54
Charlestown.....	3,009 71	909 98	1,865 35	1,258 50	7,801 33	.....	.....	14,844 87
Brighton.....	2,480 42	.....	20,283 12	17,647 12	722 51	.....	.....	41,133 17
West Roxbury.....	9,112 67	.....	26,915 03	24,798 55	2,497 22	10,003 37	.....	73,326 84
Dorchester.....	5,200 63	.....	10,670 40	2,057 95	4,162 22	115 22	.....	22,206 42
Roxbury South and Jamaica Plain.....	21,063 29	15 72	10,661 94	.....	10,961 78	1,765 80	.....	44,468 53
City Proper.....	18,839 50	808 44	26,203 82	3,163 99	21,619 63	.....	.....	70,635 38
Ashmont.....	9,174 72	629 28	9,798 05	2,130 55	4,302 15	.....	.....	26,034 75
Hyde Park.....	23,486 61	96 86	8,572 17	5,189 27	1,063 48	79 32	.....	38,487 71
							* \$498,850 57	498,850 57
Totals.....	\$105,948 06	\$2,992 28	\$128,978 82	\$59,639 38	\$70,995 39	\$12,170 94	\$498,850 57	\$879,575 44

* Miscellaneous includes: New edgestone, sidewalk and gutters, \$3,289.40; concrete roadway repairs, \$927.95; sanding icy streets, \$5,895.90; fence repair, \$6,311.17; granolithic sidewalk repairs, \$93,738.14; F-7, \$6,847; F-11, \$1,015.57; signs, \$15,959.46; miscellaneous, \$365,468.98.
 Special Appropriations: Snow Removal, \$514,889.96; Public Ways, Construction of (revenue, \$127,469.43), (non-revenue, \$199,380.53); Work Relief Program, \$537,868.89; Reconstruction of Streets, \$19,110.71; H. M. O., \$41,401.42.
 Total, Maintenance and Specials, \$2,339,696.38.

STREET OPENINGS.

Under classes 1 and 2 of the schedule of permit fees there were issued for openings in public ways as follows:

	Number of Permits.
City Departments	2,716
Public Service Corporations	2,320
Emergency for same	1,490
Miscellaneous	786
Total	7,312

Permits for other than street openings were as follows:

Painting and minor repairs	2,291
Placing and removing signs on buildings	503
Special permits	246
Erecting awnings	126
Moving buildings in street	1
Cleaning snow from roofs	5
Raising and lowering safes and machinery	81
Total	3,253
Grand total	10,565

The fees received from these permits amount to \$15,516.48; of this amount \$12,432.23 was deposited with the City Collector, and \$3,084.25 was billed to public service corporations.

BONDS.

There are now on file in this office 1,515 bonds in amounts of one, three, four and twenty thousand dollars, covering the city against claims for damages, etc., through the use of permits.

APPENDIX C.

REPORT OF THE DIVISION ENGINEER OF THE
SANITARY DIVISION.

BOSTON, January 2, 1942.

To the Commissioner of Public Works.

DEAR SIR,— I submit herewith a statement of the activities and expenditures of the Sanitary Division for the year ending December 31, 1941:

Maintenance expenditures	\$2,076,762	51
Motor deficiency	32,211	38
Total cost approach	\$2,108,973	89
I. Waste collection and disposal	\$1,445,902	16
(a) By contract (Table II)	\$639,096	38
(b) By day labor (Table III)	806,805	78
II. Street cleaning (Table V)	615,645	73
III. Not directly chargeable to 1941 operation	47,426	00
(a) For other services	\$5,663	52
(b) Pensions	8,900	75
(c) Injured roll	256	73
(d) W. P. A.	410	71
(e) Unused stock	10,139	79
(f) Preventive street cleaning	22,054	50
Personnel changes in permanent force:		
Total personnel January 1, 1941		682
Transfers from other departments and divisions		10
New appointments		7
Reinstatements		6
Deaths	20	705
Resignations	21	
Retirements	30	
Discharges	5	
Transfers out	9	
		85
Total personnel January 1, 1942		620

Comparison of 1940 Costs.— There were increases over last year in the old contract districts of \$16,000, while the creation of new contract districts accounted for \$187,000. Street cleaning increased \$43,000. There was a decrease of \$15,000 in the day labor waste collection account, and a decrease of \$13,000 in the indirect account, making a net increase of \$77,000.

The increases in the contract districts were as follows:

East Boston	\$745
Charlestown	6,624
Brighton	976
West Roxbury	1,742
Dorchester	5,362
Elm Hill	646
Hyde Park	181
Total	<u>\$16,276</u>

Districts.—At the beginning of this year, two new contract districts were added, namely, Back Bay district and a section of Roxbury, called Dudley district. On March 17 the South Boston district was changed from day labor to contract, making ten contract districts in all.

Welfare.—Welfare figures continued to decrease, and dropped from 2,084 man days per week at the end of 1940 to 439 at the end of 1941.

W. P. A.—During the year a W. P. A. project was in progress, which employed nineteen workers. The work consisted of making field observations and measurements, and compiling, summarizing, tabulating, correlating and mapping data relating to street and alley cleaning from records of the Sanitary Division and from field observations.

Aluminum Collection.—As a part of the National Defense Program, one week in August was set for the collection of discarded aluminum utensils. Collections were made from the houses. Boy and Girl Scouts made house-to-house collections and placed this material in city trucks. The aluminum collected was weighed and relayed to a central storehouse.

The public responded patriotically, even going to such extremes as purchasing new pots and pans for the collection to show the depth of their cooperation, with the result that 111,286 pounds were collected.

However, the plan, which was not conceived by the city authorities, had serious defects. The regular junk collectors were excluded from participation. There was thus no provision for processing the material, because without separation of the iron handles and stiffeners in the rims, the material was useless. Also, the time chosen was during the vacation season and many people were not at home. Thus, the production was less than it should have been.

Manpower.— The National Defense Program and the country's going to war in December caused separations from the service of the Sanitary Division for military leaves of absence so rapidly that we shall soon be faced with a serious shortage of manpower.

Respectfully submitted,

ADOLPH J. POST,
Division Engineer.

TABLE I.
Amount Expended for the Collection and Disposal of Ashes and Garbage by Districts, 1941.

Districts.	Population.	ASHES AND RUBBISH.		GARBAGE.		Total Cost.	Per Capita.
		Cost.	Per Capita.	Cost.	Per Capita.		
1. South Boston.....	58,889	\$23,130 09	—	\$4,175 93	—	* \$27,306 02	—
South Boston (contract).....	—	62,315 16	\$1 4509	8,120 82	\$0 2008	70,435 98	\$1 6509
2. East Boston.....	59,663	28,077 02	0 4706	14,847 31	0 2488	42,924 33	0 7194
3. Charlestown.....	25,587	49,226 34	1 924	—	—	49,226 34	1 9240
4. Brighton.....	62,309	26,329 83	0 4225	17,768 50	0 2851	44,099 33	0 7077
5. West Roxbury.....	87,606	46,187 36	0 5272	25,734 32	0 2937	71,921 68	0 8209
6. Dorchester.....	193,892	118,462 58	0 6109	88,610 88	0 4571	207,103 46	1 0680
7. Roxbury.....	58,461	205,625 31	3 5173	68,620 98	1 1738	274,246 29	4 6911
7A. Elm Hill.....	24,083	12,407 54	0 5151	8,909 05	0 3700	21,316 59	0 8851
7B. Dudley.....	35,385	47,154 21	1 3326	8,932 68	0 2524	56,136 89	0 1586
9. South End.....	70,549	286,132 68	4 0558	—	—	286,132 68	4 0558
9A. Back Bay.....	22,648	54,664 46	2 1436	5,358 29	0 2365	60,022 75	2 6502
10. North and West Ends.....	46,922	199,292 15	4 2473	19,828 64	0 4226	219,120 79	4 6699
11. Hyde Park.....	24,742	7,954 52	0 3215	7,954 51	0 3215	15,909 03	0 643
Totals.....	770,736	\$1,166,959 25	\$1 514	\$278,942 91	\$0 3619	\$1,445,902 16	\$1 876

* Includes cost of city work to March 17, 1941.

TABLE II.
Cost of Collection and Disposal of Refuse by Contract in City of Boston, 1941.

CONTRACT DISTRICTS.	CHARACTER OF REFUSE.	Cubic Yards.	Cost per District.	Cost per Cubic Yard.	Population.	Total Cost Per Capita.
South Boston.....	(Mixed refuse.....	69,128				
	(Garbage.....	3,497				
	(Totals.....					
East Boston.....	(Mixed refuse.....	72,625	\$70,435 98	\$0 9698	* 58,889	* \$1 5108
	(Garbage.....	77,532				
	(Totals.....	3,136				
Charlestown.....	(Mixed refuse.....	80,668	\$42,924 33	\$0 5321	59,663	\$0 7194
	(Garbage.....	42,745				
	(Totals.....	—				
Brighton.....	(Mixed refuse.....	42,745	\$49,226 34	\$1 1516	25,587	\$1 9240
	(Garbage.....	70,839				
	(Totals.....	7,450				
West Roxbury.....	(Mixed refuse.....	78,289	\$44,099 33	\$0 5633	62,309	\$0 7077
	(Garbage.....	111,947				
	(Totals.....	16,771				
Dorchester.....	(Mixed refuse.....	128,718	\$71,921 68	\$0 5587	87,606	\$0 8209
	(Garbage.....	293,756				
	(Totals.....	49,271				
		343,027	\$182,393 56	\$0 5317		

	Garbage disposal, proportionate charge.....		24,709 90		
	Totals.....	343,027	\$207,103 46	\$0 6037	193,892
	(Mixed refuse.....	28,715			
Roxbury (Elm Hill).....	Garbage.....	5,964			
	Totals.....	34,679	\$21,316 59	\$0 6147	24,083
	(Mixed refuse.....	47,442			
Roxbury (Dudley).....	Garbage.....	3,997			
	Totals.....	51,439	\$56,136 89	\$1 0913	35,385
	(Mixed refuse.....	45,062			
Back Bay (9A).....	Garbage.....	2,376			
	Totals.....	47,438	\$60,022 75	\$1 2652	22,648
	(Mixed refuse.....	22,158			
Hyde Park.....	Garbage.....	5,790			
	Totals.....	27,948	\$15,909 03	\$0 5692	24,742
	(Mixed refuse.....	809,324			
Totals.....	Garbage.....	98,252			
	Totals.....	907,576	\$639,096 38	\$0 7041	594,804

* Contract from March 17 to December 31.

TABLE III.

Cost of Collection and Disposal of Refuse by Day Labor Force in the City of Boston for the Year Ending December 31, 1941.

DISTRICTS AND POPULATION.	CHARACTER OF REFUSE.	Cubic Yards.	COST PER CUBIC YARD.			TOTAL COST.		Total Cost, Collection and Disposal.	Total Cost Per Capita.
			To Collect.	For Disposal.	Collection and Disposal.	Cost to Collect.	Cost for Disposal.		
1. South Boston (58,889) 2½ months.	Mixed refuse.....	21,313	\$0 5836	\$0 50151	\$1 0805	\$12,439 74	\$10,690 35	\$23,130 09	\$1 8853
	Garbage.....	1,239	2 8682	0 50151	3 3704	3,553 74	622 19	4,175 93	0 34
	Totals.....	22,552	\$0 7091	\$0 50151	\$1 2108	\$15,993 48	\$11,312 54	\$27,306 02	\$2 2257
7. Roxbury (58,461).....	Mixed refuse.....	129,403	\$1 0868	\$0 50151	\$1 589	\$140,638 41	\$64,986 90	\$205,625 31	\$3 5173
	Garbage.....	10,490	6 0400	0 50151	6 5415	63,360 14	5,260 84	68,620 98	1 1738
	Totals.....	139,893	\$1 4582	\$0 50151	\$1 9604	\$203,998 55	\$70,247 74	\$274,246 29	\$4 6911
8 and 9. South End (70,549).....	Mixed refuse.....	149,599	\$1 4113	\$0 50151	\$1 9146	\$211,132 12	\$75,000 36	\$286,132 68	\$4 0558
	Garbage.....	—	—	—	—	—	—	—	—
	Totals.....	149,599	\$1 4113	\$0 50151	\$1 9146	\$211,132 12	\$75,000 36	\$286,132 68	\$4 0558
10. North and West Ends (46,922).....	Mixed refuse.....	119,681	\$1 1613	\$0 50151	\$1 6651	\$130,270 93	\$60,021 22	\$199,292 15	\$4 2473
	Garbage.....	6,725	2 4460	0 50151	2 9485	16,455 99	3,372 65	19,828 64	0 4226
	Totals.....	126,406	\$1 2319	\$0 50151	\$1 7334	\$155,726 92	\$63,393 87	\$219,120 79	\$4 0699
Totals (234,821).....	Mixed refuse.....	419,996							
	Garbage.....	18,454							
	Totals.....	438,450	\$1 3384	\$0 50151	\$1 8401	\$586,851 27	\$219,954 51	\$806,805 78	\$3 4338

TABLE IV.
Comparative Costs Per Cubic Yard, 1940-1941.

DAY LABOR DISTRICTS.	COLLECTION COST.		TOTAL COST, DISPOSAL.		Cubic Yards. 1940.	Cubic Yards. 1941.
	1940.	1941.	1940. \$0 48106	1941. \$0 50151		
1. South Boston *.....	\$0 76688	\$0 7091	\$1 24789	\$1 2108	105,071	22,552
7. Roxbury †.....	1 08000	1 4582	1 56090	1 9604	201,210	139,893
9. South End ‡.....	1 01399	1 4113	1 47551	1 9146	219,839½	149,599
10. North and West Ends.....	1 04755	1 2319	1 48668	1 7334	129,799½	126,406
Average.....	\$1 00982	\$1 3384	\$1 46753	\$1 8401	655,920	438,450
Collection Cost.....					\$656,564 55	\$586,851 27

* Contract district after March 16, 1941.

† Contract district 7B "Dudley" established 1941.

‡ Contract district 9A "Back Bay" established 1941.

CONTRACT DISTRICTS.	COST PER CUBIC YARD.		Cubic Yards. 1940.	Cubic Yards. 1941.
	1940.	1941.		
1. South Boston.....		\$0 9698		72,625
2. East Boston.....	\$0 5209	0 5321	80,973	80,668
3. Charlestown.....	1 1436	1 1516	37,252	42,745
4. Brighton.....	0 5738	0 5633	75,150	78,289
5. West Roxbury.....	0 5605	0 5587	125,194	128,718
6. Dorchester (including disposal).....	0 6109	0 6037	330,213	343,027
7A. Elm Hill.....	0 5700	0 6147	36,258	34,679
7B. Dudley.....		1 0913		51,439
9A. Back Bay.....		1 2652		47,438
11. Hyde Park.....	0 5953	0 5692	26,418	27,948
Average.....	\$0 6131	\$0 7041		
Totals.....			711,458	907,576

TABLE V.
Street Cleaning and Oiling Service, 1941.

Distribution of Expenditures.

Removing snow	\$69,832 50
Brooming	296,845 94
Pushcart patrolling	124,886 35
Horse-drawn sweeping	11,632 80
Motor sweeping	60,245 40
Refuse box collections	27,676 79
Sanding slippery streets	1,640 83
Underpass	2,461 00
Gardening	2,129 50
Aluminum drive	1,048 30
Property clerk	1,430 28
Total	<hr/> \$599,829 69
Oiling and watering of public streets and ways,	15,816 04
Total	<hr/> <hr/> \$615,645 73

APPENDIX D.

REPORT OF THE DIVISION ENGINEER OF
THE SEWER DIVISION.

BOSTON, January 2, 1942.

To the Commissioner of Public Works.

I submit herewith statement of the activities and expenditures of the Sewer Division for the year ending December 31, 1941.

During the fiscal year 1941, there were built by contractors, day labor, private parties and by the city under W. R. P. supervision 9.96 miles of common sewers and surface drains throughout the city. After deducting 0.95 miles of sewers and surface drains, rebuilt or abandoned, the net increase for 1941 is 9.01 miles, which added to the existing 1,210.40 miles of common sewers and surface drains and 30.93 miles of intercepting sewers, makes a grand total of 1,250.34 miles of all sewers belonging to the City of Boston, and under the care of the Sewer Division on January 1, 1942.

There were 229 catch-basins built or rebuilt and eleven abandoned or removed during the year, making a net gain of 218 catch-basins and a grand total of 22,436 catch-basins under the care of the Sewer Division on January 1, 1942.

Entrance fees to the amount of \$2,337 have been deposited with the City Collector for collection from estates upon which no sewer assessments were ever paid, in accordance with Ordinances of 1910, chapter 9, section 10.

998 permits have been issued, viz.: 335 to district foremen and contractors and 663 to drainlayers for repairing or laying new house drains. Inspectors from this office have personally inspected the work done under these drainlayers' permits.

Plans for the assessments of estates for sewer construction have been furnished the Board of Street Commissioners, representing 10,881.75 linear feet of sewers.

624 complaints have been investigated and inspectors are instructed to report in writing in each case.

700 catch-basin complaints were received.

700 gasoline traps have been examined in garages and cleansing establishments.

616 grease traps have been examined in hotels, restaurants and commercial establishments.

Reported in writing on 2,929 municipal liens to the City Collector, in accordance with chapter 60, section 23, of the General Laws. Reported orally on about 3,500 requests for information on municipal liens.

243 notices have been mailed to abutters in conformity with the Ordinances, chapter 27, section 8, apprising them of the construction of new sewers or repairs to old sewers.

During the year 1941, 3,729 catch-basins were cleaned by day labor and 928 by advertised contract.

ROBERT P. SHEA,
Division Engineer.

Summary of Sewer Construction for the Twelve Months Ending December 31, 1941.

DISTRICTS.	Built by the City Either by Contract or Day Labor.	Built by the City Under Auspices of W. R. P.	Built by Private Parties, Chapter 90, Streets or Other City Departments.	Total Lengths Built	
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City Proper.....	None.	None.	461.00	461.00	0.088
Roxbury.....	None.	509.91	148.00	657.91	0.125
South Boston.....	138.00	None.	None.	138.00	0.026
East Boston.....	494.05	None.	526.70	1,020.75	0.194
Charlestown.....	None.	None.	None.	None.	None.
Brighton.....	1,733.00	None.	None.	1,733.00	0.328
West Roxbury.....	632.00	17,340.00	None.	17,972.00	3.402
Dorchester.....	5,630.39	3,967.17	350.95	9,948.51	1.884
Hyde Park.....	2,582.55	10,546.61	7,543.29	20,672.45	3.916
Totals.....	11,209.99	32,363.69	9,029.94	52,603.62	9.963

Summary of Sewer Construction for Five Years Previous to January 1, 1942.

	1937.	1938.	1939.	1940.	1941.
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>
Built by the city by contract or day labor....	10,717.02	2,371.75	1,959.27	5,178.99	11,209.99
Built by the city under auspices of P. W. A., W. P. A. or W. R. P.,	43,986.51	43,239.69	39,096.06	43,649.38	32,363.69
Built by private parties or other city departments.....	1,786.79	1,771.00	3,087.45	8,237.38	9,029.94
Totals.....	56,490.32	47,382.44	44,142.78	57,065.75	52,603.62

Total Length of Sewers.

DISTRICTS.	Total Length Built During Twelve Months Ending December 31, 1941.	Lengths Removed or Abandoned During Twelve Months Ending December 31, 1941.	Additional Length for the Twelve Months Ending December 31, 1941.	
	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Linear Feet.</i>	<i>Miles.</i>
City Proper.....	461.00	None.	461.00	0.088
Roxbury.....	657.91	30.59	* 2,401.09	* 0.454
South Boston.....	138.00	None.	138.00	0.026
East Boston.....	1,020.75	1,966.00	* 945.25	* 0.179
Charlestown.....	None.	None.	None.	None.
Brighton.....	1,733.00	.....	1,733.00	0.328
West Roxbury.....	17,972.00	.....	17,972.00	3.402
Dorchester.....	9,948.51	.....	9,948.51	1.884
Hyde Park.....	20,672.45	.....	20,672.45	3.916
Totals.....	52,603.62	5,025.00	47,578.62	9.011

Total Length of Sewers.

Miles.

Common sewers or surface drains built previous to January 1, 1941	1,210.40
Common sewers or surface drains built between January 1 and December 31, 1941	9.01
Total length of common sewers or surface drains built to December 31, 1941	1,219.41
Total city intercepting sewers connecting with Metropolitan sewers to December 31, 1941 †	6.81
Total Boston main drainage intercepting sewers to December 31, 1941 †	24.12
Grand total of common and intercepting sewers to December 31, 1941	1,250.34
Total mileage of streets containing sewerage works to January 1, 1942	682.87

* Decrease in lengths.

† No additional lengths built during 1941.

Catch-Basins in Charge of Sewer Division.

DISTRICTS.	CATCH-BASINS FOR TWELVE MONTHS ENDING DECEMBER 31, 1941.			TOTAL FOR WHOLE CITY IN CHARGE OF SEWER DIVISION.	
	Number Built or Rebuilt.	Number Abandoned or Removed.	Net Increase.	Previous Report to January 1, 1941.	Grand Total to January 1, 1942.
City Proper.....	1	0	1	3,626	3,627
Roxbury.....	6	1	5	3,383	3,388
South Boston.....	1	0	1	1,455	1,456
East Boston.....	14	0	14	1,084	1,098
Charlestown.....	1	0	1	838	839
Brighton.....	15	0	15	1,954	1,969
West Roxbury.....	64	0	64	3,788	3,852
Dorchester.....	67	9	58	5,265	5,323
Hyde Park.....	60	1	59	825	884
Totals.....	229	11	218	22,218	22,436

Financial Statement from January 1, 1941, to December 31, 1941.

	Balance on Hand January 1, 1941.	Appropriations and Revenue, 1941.	Transfers from Net.	Transfers to Net.	Total Credits December 31, 1941.	Total Expendi- tures.	Unexpended.
Sewer Service.....	.....	\$443,262 64	\$21,000 00	\$3,950 50	\$422,262 64	\$415,666 11	\$6,596 53
II Item.....	\$19,591 28	.....	.....	.....	.....	19,591 28	
Sewerage Works, Revenue.....	.....	150,391 47	3,950 50	.....	150,391 47	133,705 41	16,686 06
Sewerage Works, Non-Revenue.....	23,355 62	200,312 57	.....	.....	223,668 19	92,765 98	130,902 21
W. R. P.....	.....	307,600 00	.....	7,600 00	307,600 00	277,909 06	29,690 94

Sewage Statistics for Year 1941, Calf Pasture Pumping Station.

MONTH.	Total Gallons Pumped.	Average Gallons Pumped.	Maximum Gallons Pumped.	Minimum Gallons Pumped.	Average Lift. (Feet.)
January.....	3,154,308,408	101,751,884	197,902,202	84,744,843	39.4
February.....	2,743,532,541	97,983,305	204,347,811	63,962,198	39.4
March.....	2,756,347,067	88,914,422	148,890,680	69,507,325	39.4
April.....	2,720,985,941	90,699,531	150,551,698	78,162,621	39.4
May.....	2,894,663,522	93,376,243	160,581,091	74,573,605	39.4
June.....	2,823,344,834	94,111,495	156,025,992	75,865,254	39.4
July.....	3,209,454,303	103,530,785	159,589,626	90,191,454	39.4
August.....	2,944,240,694	94,975,506	112,702,272	76,896,838	39.4
September.....	2,821,860,370	94,062,013	142,004,763	76,739,768	39.4
October.....	2,784,425,051	89,820,163	121,336,777	71,717,705	39.4
November.....	2,717,411,899	90,580,396	152,076,960	64,236,704	39.4
December.....	2,825,701,269	91,151,653	184,324,878	78,311,952	39.4
Totals.....	34,396,275,899	1,130,957,396			
Averages.....	94,236,372	94,246,449			

Running Time of Pumps.—No. 1, 146 hours, 40 minutes; No. 2, 333 hours, 10 minutes; No. 3, 476 hours, 35 minutes; No. 4, 680 hours, 30 minutes; No. 5, 3,104 hours, 25 minutes; No. 6, 5,245 hours, 55 minutes; No. 7, 8,688 hours, 3 minutes.

NOTE.—Gallons pumped by oil, 17,372,838,499; gallons pumped by electricity, 17,023,437,400; total, 34,396,275,899.

Sewage Pumped.

Total gallons pumped	34,396,275,899
Daily average gallons pumped	94,236,372
Average dynamic head	39.2
Foot gallons	1,348,334,015,240
Foot pounds	11,284,207,373,544

Fuel Record for 1941, Calf Pasture Pumping Station.

MONTH.	Fuel Oil Received. Gallons.	Fuel Oil Used. Gallons.	Amount.
January	73,517	69,090	\$2,555 58
February	70,226	63,115	2,441 27
March	68,254	70,229	2,047 53
April	57,046	62,985	2,379 10
May	65,770	62,622	2,443 46
June	58,549	61,574	2,175 33
July	66,711	62,555	2,478 31
August	59,946	60,514	2,269 99
September	51,456	55,430	1,837 21
October	63,458	62,505	2,361 15
November	68,876	66,411	2,557 95
December	66,155	67,870	2,456 72
Totals	769,964	764,700	\$28,003 60

Electric Current Used for 1941, Calf Pasture Pumping Station.

MONTH.	Edison Engine Meters. Kilowatt Hours.	Edison Outside Meters. Kilowatt Hours.	Amount.
January	257,800	324,220	\$4,125 99
February	222,800	269,120	4,026 17
March	200,680	191,580	3,097 05
April	197,100	218,160	3,247 01
May	213,300	243,700	3,848 00
June	225,900	248,000	3,910 16
July	267,100	242,000	3,614 56
August	209,800	273,000	3,945 75
September	174,000	235,000	3,779 57
October	160,000	215,500	3,255 43
November	163,600	239,540	3,663 18
December	185,100	183,940	3,365 64
Totals	2,477,180	2,883,760	\$43,878 53

Cost of Pumping for 1941, Calf Pasture Pumping Station.

ITEMS.	Cost.	Cost per Million Foot Gallons.
Labor.....	\$65,420 90	\$0.04852
Edison power.....	43,878 53	0.03254
Fuel oil.....	28,003 60	0.02077
Oils and waste.....	822 22	0.00061
Rubber valves and packing.....	771 94	0.00057
Miscellaneous renewals and supplies.....	3,409 00	0.00253
Totals.....	\$142,306 19	\$0.10554
Labor at screens.....	\$10,824 58	\$0.00803

Amount of Refuse Removed from Filth Hoist for 1941, Calf Pasture Pumping Station.

MONTH.	Cheeses.	Weight. (Pounds.)
January.....	162	38,880
February.....	159	38,160
March.....	181	43,440
April.....	176	42,240
May.....	179	42,960
June.....	178	42,720
July.....	176	42,240
August.....	183	43,920
September.....	178	42,720
October.....	173	41,520
November.....	166	39,840
December.....	168	40,320
Totals.....	2,079	498,960

249 $\frac{960}{2240}$ tons.

MAINTENANCE EXPENDITURES FROM JAN- UARY 1, 1941, TO DECEMBER 31, 1941.

SEWER DIVISION.

Improved Sewerage.

Pumping Station, Calf Pasture, inside . . .	\$69,441 65	
Pumping Station, Calf Pasture, outside . . .	6,931 15	
Pumping Station, Calf Pasture, engines . . .	32,643 69	
Pumping Station, Calf Pasture, boilers . . .	40,907 64	
Pumping Station, Calf Pasture, Union Park street . . .	9,168 73	
Pumping Station, Calf Pasture, Summer street, Moon Island . . .	2,750 75	
Main and intercepting sewers	25,691 58	
	24,339 10	
		\$211,874 29

Maintenance — Regular.

Automobiles	\$30,762 63	
Cleaning catch-basins	57,827 30	
Cleaning sewers	44,814 16	
Fuel and oil	900 94	
Hardware and tools	838 72	
House connections	12,175 66	
Maintenance — Stony Brook	727 49	
Office expense	2,690 29	
Office salaries	15,742 56	
Stock	1,290 30	
Yard and locker	29,588 08	
Testing laboratory	926 05	
		198,284 18

Maintenance — Repairs.

Repairing department buildings	\$2,138 80	
Repairing catch-basins, South Boston	247 86	
Repairing catch-basins, East Boston	635 03	
Repairing catch-basins, Charlestown	53 67	
Repairing catch-basins, Brighton	647 91	
Repairing catch-basins, West Roxbury	758 54	
Repairing catch-basins, Dorchester	1,916 02	
Repairing catch-basins, Hyde Park	706 40	
Repairing catch-basins, Roxbury	1,192 19	
Repairing catch-basins, City Proper	1,157 77	
Repairing sewers, South Boston	171 21	
Repairing sewers, East Boston	580 04	
Repairing sewers, Charlestown	101 09	
Repairing sewers, Brighton	623 74	
Repairing sewers, West Roxbury	1,674 95	
Repairing sewers, Dorchester	663 38	
Repairing sewers, Hyde Park	307 25	
Repairing sewers, Roxbury	651 42	
Repairing sewers, City Proper	1,668 13	
		15,895 40

Maintenance — Miscellaneous.

Miscellaneous	\$19,130 21	
Back Bay Fens	73 63	
Telephones	658 53	
Rubber goods	228 62	
Pensions and annuities	5,246 57	
H item	19,591 28	
Holiday, vacation, etc.	27,320 50	
		<hr/>
		72,249 34
		<hr/>
Total		\$498,303 21

CREDITS.

Trucks and cleaning machines used on jobs	\$36,436 50	
Maintenance stock used on jobs	1,472 49	
Construction stock used on jobs	1,967 16	
Maintenance charges paid by W. R. P.	2,513 29	
Maintenance charges paid by Sewerage Works,	19,607 90	
Debit transferred to Sewerage Works for trucks	2,059 00	
Debit transferred to Sewerage Works for trucks	1,891 50	
		<hr/>
		65,947 84
		<hr/>
		\$432,355 37

DEBITS.

Sewerage Works charges paid by maintenance	2,902 02	
		<hr/>
Total expenditures, 1941	\$435,257 39	

Sewer Division — Maintenance, Expenditures, Details, 1941.

Accounts.	Totals.	Labor.	Autos, Trucks and Cleaning Machines.	Materials.	Contractors.	Miscellaneous.
Automobiles.....	\$30,762 63	\$2,813 02	\$441 00	\$160 15	.....	Equipment..... \$3,640 74 Tools..... 32 64 Repairs..... 7,602 71 Supplies..... 3,413 16 Storage..... 1,405 65 Fees..... 31 04 Sundries..... 49 37 New cars..... 10,863 19
Cleaning catch-basins.....	57,827 30	35,172 12	16,657 25	373 24	\$5,613 19	Sundries..... 11 50
Cleaning sewers.....	44,814 16	34,101 01	10,316 50	296 05	.....	Dumping..... 10 60
Fuel and oil.....	900 94	.....	.....	.....	.....	Oil..... 63 76 Coal..... 837 18
Hardware and tools.....	838 72	.....	.....	.....	.....	Hose..... 310 75 Hardware..... 9 70 Instruments and tools..... 486 82 Repairs..... 31 45
House connections.....	12,175 66	12,023 45	146 25	5 96	.....	.....
Maintenance, Stony Brook.....	727 49	610 53	116 25	71	.....	.....
Office expense.....	2,690 29	8 92	\$55 50	716 17	.....	Repairs..... 82 40 Printing..... 638 43 Postage..... 339 57 Sundries..... 29 30
Office salaries.....	15,742 56	15,742 56	.....	.....	.....	.....
Stock.....	1,290 30	101 50	43 50	1,145 30	.....	.....
Yard and locker.....	29,588 08	27,795 43	1,015 25	504 73	.....	Electric service..... 223 58 Repairs..... 2 39 Sundries..... 46 70

Testing laboratory.....	926 05	8 00	251 25	270 86	375 00	Electric service.....	20 94
Miscellaneous.....	46,450 71	15,015 30	2,398 00	04 69		Dumping.....	1 25
						Incidentals.....	1,650 97
						Vacation.....	9,974 94
						Sickness.....	1,062 65
						Holiday.....	6,737 21
						Time allowed.....	9,545 70
Back Bay Fens.....	73 63					Electric service.....	73 63
Telephones.....	658 53					Telephone service.....	658 53
Rubber goods.....	228 62					Boots.....	82 58
						Mitts.....	24 00
						Coats.....	108 24
						Hats.....	13 80
Pensions and annuities.....	5,246 57					Veterans.....	5,103 57
Construction charges paid by II item.....	19,591 28	19,591 28				Laborers.....	143 00
Repair department buildings.....	2,138 80	2,006 05		132 75			
Repair catch-basins, South Boston.....	247 86	203 20	12 00	32 66			
Repair catch-basins, East Boston.....	635 03	326 90	48 00	92 52	167 61		
Repair catch-basins, Charlestown.....	53 67		24 00	29 67			
Repair catch-basins, Brighton.....	647 91	385 53	111 00	151 38			
Repair catch-basins, West Roxbury.....	758 54	495 88	156 00	106 66			
Repair catch-basins, Dorchester.....	1,916 02	1,147 41	227 50	532 04	9 07		
Repair catch-basins, Hyde Park.....	706 40	510 95	74 25	121 20			
Repair catch-basins, Roxbury.....	1,192 19	752 78	180 00	259 41			
Repair catch-basins, City Proper.....	1,157 77	902 38	165 00	89 39		Dumping.....	1 00
Carried forward.....	\$279,987 71	\$169,804 20	\$33,238 50	\$5,085 54	\$6,164 87		\$65,634 60

Sewer Division — Maintenance, Expenditures, Details, 1941. — Concluded.

Accounts.	Totals.	Labor.	Autos, Trucks and Cleaning Machines.	Materials.	Contractors.	Miscellaneous.
<i>Brought forward</i>	\$279,987 71	\$169,804 20	\$33,238 50	\$5,085 54	\$6,164 87	..... \$65,694 60
Repair sewers, South Boston.....	171 21	143 80	9 00	18 41		
Repair sewers, East Boston.....	580 04	498 63	60 00	21 41		
Repair sewers, Charlestown.....	101 09	.....	78 00	23 09		
Repair sewers, Brighton.....	623 74	463 64	27 00	133 10		
Repair sewers, West Roxbury.....	1,674 95	1,044 96	348 00	281 99		
Repair sewers, Dorchester.....	663 38	531 46	73 50	58 42		
Repair sewers, Hyde Park.....	307 25	162 53	33 00	111 72		
Repair sewers, Roxbury.....	651 42	113 00	33 00	41 42	364 00	
Repair sewers, City Proper.....	1,668 13	1,294 70	296 00	77 43		
Totals.....	\$280,428 92	\$174,056 92	\$34,196 00	\$5,852 53	\$6,628 87	..... \$65,694 60
Credits.						
Maintenance stock used on maintenance.....	\$1,472 49					
Construction stock used on maintenance.....	1,967 16					
Trucks, etc., used on maintenance.....	36,436 50					
Maintenance charges paid by W. R. P.	2,513 29					

Maintenance charges paid by Sewerage Works, 19,607 90	65,947 84	25,451 49	.....	4,153 80	.....	.....	36,342 55
Debit transfers to Sewerage Works, 3,950 50							
Totals,.....	\$220,481 08	\$148,605 43	\$34,196 00	\$1,698 73	\$6,628 87	.....	\$29,352 05
DEBITS.							
Sewerage Works charges paid by maintenance,.....	2,902 02	2,902 02					
Total expenditures,.....	\$223,383 10	\$151,507 45	\$34,196 00	\$1,698 73	\$6,628 87	.....	\$29,352 05

Sewer Division — Maintenance, Expenditures, Details, 1941.

Accounts.	Totals.	Labor.	Trucks.	Repairs.	Grease, Oil and Gasoline.	Fuel and Power.	Tools, Materials and Instru- ments.	Taxes.	Miscel- laneous.
Pumping Stations:									
Calf Pasture, inside.....	\$69,441 65	\$24,313 30	.....	\$19 80	\$7 50	\$13,878 53	\$1,069 02	.....	\$153 50
Calf Pasture, outside.....	6,931 15	5,972 29	\$41 25	.....	.....	.....	942 71	.....	1 90
Calf Pasture, engines.....	32,643 69	30,284 71	.....	150 03	884 84	.....	1,324 11	.....	.....
Calf Pasture, boilers.....	40,907 61	11,494 23	168 00	209 00	11 25	27,960 61	1,109 55	.....	.....
Calf Pasture, Union Park street.....	9,168 73	7,010 50	283 50	.....	24 46	1,547 87	135 32	.....	167 08
Calf Pasture, Summer street.....	2,750 75	1,371 50	.....	.....	.....	1,379 25	.....	.....	.....
Moon Island.....	25,691 58	22,844 79	54 00	139 33	428 51	298 80	571 20	\$1,263 60	88 35
Main and intercepting sewers.....	24,339 10	21,731 03	2,189 00	.....	.....	.....	118 17	.....	.....
Totals.....	\$211,874 29	\$124,978 25	\$3,008 75	\$518 16	\$1,356 56	\$75,065 06	\$5,273 08	\$1,263 60	\$410 83

Recapitulation, Maintenance, Detail, 1941.

ACCOUNTS.		Improved Sewers.	Outside Improved Sewers.	Total.
Labor.....		\$124,978 25	\$206,623 99	\$331,602 24
Contractors.....			6,628 87	6,628 87
Trucks.....		3,008 75	34,196 00	37,204 75
Repairs.....		518 16	7,718 95	8,237 11
Cleaning wells and tanks.....				
Grease, oil and gasoline.....		1,356 56		1,356 56
Fuel, power and light.....		75,065 06	1,219 09	76,284 15
Tools and instruments.....			830 21	830 21
Materials.....		5,273 08	5,852 53	11,125 61
Equipment and supplies.....			8,280 52	8,280 52
Storage.....			1,605 65	1,605 65
Telephones.....			658 53	658 53
Taxes.....		1,263 60		1,263 60
Sundries.....		410 83	1,951 39	2,362 22
Totals.....		\$211,874 29	\$286,428 92	\$498,303 21
CREDITS.				
	Improved Sewers.	Outside Improved Sewers.		
Maintenance stock used on maintenance.....	\$26 04	\$1,446 45		
Sewerage Works stock used on maintenance.....		1,967 16		
Trucks used on maintenance.....	3,008 75	33,427 75		
Maintenance charges paid by W. R. P.....		2,513 29		
Maintenance charges paid by Sewerage Works.....		19,607 90		
Debit transferred to Sewerage Works for trucks.....		3,950 50		
Totals.....			62,413 05	65,947 84
DEBITS.				
Sewerage Works charges paid by maintenance.....			\$223,515 87	\$432,355 37
Total expenditures, Sewer Division, 1941.....			2,902 02	2,902 02
			\$226,417 89	\$435,257 39

W. R. P. Construction, January 1, 1941, to December 31, 1941, Inclusive.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
MISCELLANEOUS.						
Miscellaneous.....	Jan. 1, 1941	Dec. 31, 1941	W. R. P.	.....	.....	\$71,363 34
Manhole survey.....	Jan. 1, 1941	Dec. 31, 1941	W. R. P.	.....	.....	230 21
SOUTH BOSTON.						
Private land, off E street.....	June 11, 1940	Nov. 9, 1940	W. R. P.	.....	No construction in 1941.....	1,979 30
Testing laboratory.....	.....	.....	W. R. P.	.....	Electric service. Gas service. Supplies.	156 24
EAST BOSTON.						
Maverick street, housing project.....	.....	.....	W. R. P. (housing project).....	.....	Engineering.....	2,802 11
BRIGHTON.						
Portina road, from Wiltshire road to 100 feet south of Colwell avenue.	Nov. 8, 1940	Jan. 16, 1941	W. R. P.	.....	No construction in 1941.....	521 08
Shepard Brook in private land, from Sorrento street to North Harvard street.	.....	.....	W. R. P.	.....	Preliminary engineering.....	51 01
Western avenue, new office building.....	Aug. 6, 1940	Not completed.	W. R. P.	.....	Building exterior completed. Including floors. Including partitions. Including equipment. Including heating. Including lighting. Including plumbing.	14,778 24

Goodenough street, from North Beacon street to Faneuil street.	.....	.....	W. R. P. ....	.....	.....	Changed to Sewerage Works contract.	93.33
Beechcroft street, from Washington street to Faneuil street.	.....	.....	W. R. P. ....	.....	.....	Preliminary engineering.	46.99
WEST ROXBURY.							
Bourne road, from Eastland road to Eastland road.	Nov. 18, 1940	May 31, 1941	W. R. P. ....	.....	.....	1 manhole. 2 catch-basins. Balance of construction reported in 1940.	3,119.14
Carolina avenue, between Call and South streets.	Oct. 10, 1940	March 5, 1941	W. R. P. ....	.....	124.00 32.00 4.00	12" pipe, sewer. 18" pipe, surface drain. 10" pipe, surface drain.	2,471.54
Cowing street, from Searle road to 160 feet northwest.	Nov. 26, 1940	April 24, 1941	W. R. P. ....	.....	160.00 166.00	10" pipe, sewer. 10" pipe, surface drain. 1 manhole.	575.36
Elmwood street Brook and Keystone street.	Nov. 12, 1940	Not completed.	W. R. P. ....	.....	730.00 660.00 15.00	7" 3" conduit. 10" pipe, sewer. 15" pipe, surface drain. 6 manholes.	30,570.64
Freeman avenue, between Washington street and Grove street.	Dec. 19, 1939	June 22, 1940	W. R. P. ....	.....	.....	No construction in 1941.	535.65
Halliday street, from Neponset avenue to Bourne street.	Nov. 29, 1940	May 13, 1941	W. R. P. ....	.....	741.00 555.00 220.00	10" pipe, sewer. 12" pipe, surface drain. 10" pipe, surface drain. 6 manholes.	2,853.79
Morey road, from Buchanan road to Vincent road, and Vincent road, from Morey road to 460 feet westerly.	Nov. 18, 1940	Sept. 13, 1941	W. R. P. ....	.....	323.00 311.00	10" pipe, sewer. 12" pipe, surface drain. 3 manholes.	7,961.26
Poplar street, between Hyde Park-West Roxbury line, and Beech street, West Roxbury.*	Jan. 6, 1941	Not completed.	W. R. P. ....	.....	.....	Inspection only.	473.02

* See West street job, Hyde Park, for lengths constructed.

W. R. P. Construction, January 1, 1941, to December 31, 1941, Inclusive.—Continued.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
<i>WEST ROXBURY.—Concluded.</i>						
Riverview road, from existing sewer to 500 feet south of Upland road.	Jan. 18, 1941	May 12, 1941	W. R. P.	785.00	10" pipe, sewer. 4 manholes.	\$2,893 88
Veterans of Foreign Wars Parkway, from La Grange street to Bonair street.	Nov. 18, 1940	Sept. 13, 1941	W. R. P.	1,200.00 1,300.00	10" pipe, sewer. 15" pipe, surface drain. 11 manholes.	5,163 67
Washington street, between Edgemere road and Washington Heights avenue.	Nov. 7, 1940	April 18, 1941	W. R. P.	709.00 291.00 535.00 284.00	2' 6" conduit. 2' 3" conduit. 24" pipe, surface drain. 20" pipe, surface drain. 8 manholes.	10,433 31
Wald street and outlet in private land (Arnold Arboretum).	Dec. 3, 1940	April 26, 1941	W. R. P.	900.00 158.00 435.00 302.00	10" pipe, sewer. 15" pipe, surface drain. 12" pipe, surface drain. 10" pipe, surface drain. 8 manholes. 2 catch-basins.	3,389 00
Eastwood circuit, from Prospect street to Prospect street, and Belle avenue, Rock-cliff street, Gould street and private land, Oakmere road.	Feb. 24, 1941	Not completed.	W. R. P.	550.00	15" pipe, sewer.	7,601 22
Stony Brook (Section 16).			W. R. P.		Preliminary engineering.	202 35
Archdale road, between Braden street and Washington street.			W. R. P.		Preliminary engineering.	44 73
High View avenue, between Washington street and 128 feet northwesterly.	Dec. 19, 1939	May 18, 1940	W. R. P.		No construction in 1941. Labor charge.	12 38
Spring street (Parental Home).	June 18, 1940	Aug. 27, 1940	W. R. P.		No construction in 1941. Charge for lumber.	324 27

Washington street, from Rockingham avenue to opposite High View avenue.				W. R. P.	Engineering only.	239 11
Sunset Hill path, from Centre street to Sunset Hill road.				W. R. P.	Paving Division project. Engineering only.	122 39
Brook Farm road, from La Grange street to Summit street.				W. R. P.	Engineering only.	199 79
Pond street, from Moss Hill road to Brookline line.				W. R. P.	Engineering only.	182 19
Lyall street, from Veterans of Foreign Wars Parkway to Addington road.				W. R. P.	Engineering only.	35 15
Spalding street outlet, between Washington street and New York, New Haven and Hartford Railroad.				W. R. P.	Engineering only.	35 15
Heldin street, from Gardner street 400 feet northerly, and Dunwell street, from Heldin street to Baker street.				W. R. P.	Engineering only.	46 98
Atlantis street, from Lasell street to Veterans of Foreign Wars Parkway.	Sept. 17, 1940	Nov. 1, 1940		W. R. P.	Materials.	4 55
Almont street, from Savannah avenue to Walk Hill street.	Dec. 20, 1940	April 9, 1941		W. R. P.	20" pipe, surface drain. 12" pipe, surface drain. 10" minor drain. 11 manholes, 7 catch-basins.	5,070 20
Alabama street, from Currier street to Messenger street.	Sept. 30, 1940	Dec. 20, 1940		W. R. P.	No construction in 1941.	31 21
Blue Hill avenue, from American Legion Highway to Charlotte street.	March 11, 1940	Nov. 23, 1940		W. R. P.	Minor drain.	246 26
Constance street, from Adams street to 490 feet easterly.	Not started.			W. R. P.	Preliminary engineering.	40 11

W. R. P. Construction, January 1, 1941, to December 31, 1941, Inclusive.— Continued.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
DORCHESTER.— <i>Concluded.</i>						
Gallivan Boulevard (north side), from 225 feet northeast of Hallet street to 515 feet northeasterly.	Oct. 14, 1940	Dec. 31, 1940	W. R. P.	222.00 32.00	10" minor drain. 6" minor drain.	\$186 79
Harvard street, 1,040 feet north of Cummins Highway, 900 feet northeasterly and outlet in Mount Hope Cemetery, Dorchester and Hyde Park.	Nov. 18, 1940	April 30, 1941	W. R. P.	28.40 16.00 48.00	12" pipe, surface drain. 8" minor drain. 10" minor drain. 7 catch-basins.	1,037 81
Range road, between Dorchester avenue and Barna road, Gally avenue, between 80 feet northwest of Barna road and 170 feet northeasterly, Barna road, between Range road and Gally avenue, Dorchester avenue, at Range road.	June 17, 1940	Sept. 28, 1940	W. R. P.	76.00	10" pipe, minor drain. Engineering. Materials.	726 41
Slow road, from Tiverton road 620 feet southeasterly, and outlet in Tiverton road, between Lorna street and Stow road.	Nov. 18, 1940	April 8, 1941	W. R. P.	384.00 140.93 321.16 7.00 110.00 88.00	2' 6" circular concrete conduit. 24" reinforced concrete pipe. 12" pipe, surface drain. 12" cast-iron pipe, surface drain. 10" minor drain. 6" house drain. 5 manholes. 7 catch-basins.	3,812 58
Kennebec street, between Currier street and 380 feet southwesterly, and Currier street, between Alabama street and Kennebec street.	May 13, 1940	Dec. 13, 1940	W. R. P.	29.00	Minor drain.	48 80
Tiverton road, from Stow road to Glenhill road, and Owen road, from Tiverton road to Morton street, Glenhill road, from Tiverton road to 641 feet southwesterly.			W. R. P.		Preliminary engineering.	241 45

Victoria road, between 100 feet south of Gal- livan Boulevard and 490 feet southerly.	May 20, 1910	Aug. 7, 1940	W. R. P.	22.00	Minor drain.	28 73
Bird street.	Not started.		W. R. P.		Engineering.	8 47
Chelverns road, from Dorchester avenue to end of street.	April 9, 1940	May 19, 1940	W. R. P.		No construction, engineering records.	71 27
Savannah avenue, from 225 feet southwest of Canaan street to 683 feet northeasterly.	Dec. 20, 1937	April 13, 1939	W. R. P.		Engineering records.	13 88
Brockton street, from Cummins Highway to Messinger street.	March 18, 1940	May 20, 1940	W. R. P.		Engineering records.	151 59
Fifield street, between Church street and Winter street (Paving Division contract).	April 2, 1941	May 13, 1941	W. R. P. (paving project)		Engineering, inspection and materials.	227 16
Tilesboro street, between Neponset avenue and Worrell street.	Sept. 26, 1940	Oct. 28, 1940	W. R. P.	30.00	Minor drain.	19 38
Cedar Grove street, from Hallet-Davis street to 494 feet southwesterly.	Oct. 10, 1940	Nov. 7, 1940	W. R. P.		No construction.	3 77
Oakland Brook (Section 1), Messinger street, from Favre street 360 feet north- westerly, private land, from Messinger street to Almont Street Playground, Almont Street Playground, private land, from Almont Street Playground to Orlando street, and Monterey street at Orlando street.		1939	W. R. P.		Engineering records, no construc- tion.	96 38
Oakland Brook (Section 2), Richmond street and outlet in Bismarck street.	July 18, 1938	Aug. 31, 1939	W. R. P.		Engineering records.	55 11
Garner road, between Westglow street and 80 feet southerly and 176 feet north of Westglow street to 236 feet northerly.	Sept. 16, 1940	Oct. 19, 1940	W. R. P.		Materials delivered in 1940.	41 22
Stork street.	Oct. 7, 1940	Oct. 9, 1940	W. R. P.		Engineering records.	3 79
Rockingham road, between Cummins High- way and Greenfield street.	March 11, 1940	May 17, 1940	W. R. P.		Engineering records.	82 41

W. R. P. Construction, January 1, 1941, to December 31, 1941, Inclusive.— Continued.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
HYDE PARK.						
Beluel road, between Osceola and Poydras streets, Ilpewell road, between Beluel road and Osceola street, Coronada street, between Beluel road and 212 feet south-easterly, Poydras street, between Beluel road and 140 feet southwesterly, Friendship road, between Beluel road and Osceola street, private land (City of Boston), between Beluel road and Neponset river, private land (Commonwealth of Massachusetts), between Beluel road and Neponset river, and Osceola street, between River street and private land (Commonwealth of Massachusetts).	May 6, 1940	Jan. 31, 1941	W. R. P.	8.60 8.20 13.54 52.98 66.00 436.00 21.00 104.00	24" pipe, surface drain. 24" concrete pipe, surface drain. 18" concrete pipe, surface drain. 12" pipe, surface drain. 15" minor drain. 10" minor drain. 6" minor drain. 6" house drain relaid. 2 manholes. 2 catch-basins.	\$1,170 98
Blake street, between 385 feet northwest of River street to Taunton avenue, and Locust street, between Tileston and Blake streets.	Jan. 13, 1941	Aug. 1, 1941	W. R. P.	289.10 235.55 286.37 14.00 40.00 95.00	18" reinforced concrete pipe, surface drain. 15" D. S. pipe, surface drain. 12" pipe, surface drain. 12" cast-iron pipe. 10" minor drain. 6" house drain. 5 manholes.	7,520 73
Lilac road, from Central avenue to Arlington street.	Oct. 7, 1940	Dec. 19, 1940	W. R. P.		No construction in 1941.	19 31
Milton avenue, from Summit to Prospect street.	Jan. 13, 1941	April 28, 1941	W. R. P.	779.73 34.00	12" pipe, surface drain. 10" minor drain. 3 manholes. 4 catch-basins.	1,990 47
Oakland Brook (Section 3), Hyde Park Branch, in Mariposa street and outlet in Blake street and Taunton avenue.	Dec. 18, 1939	Oct. 20, 1940	W. R. P.	95.00 116.00	10" minor drain. 6" house connection.	541 86

Plasentview street, between Cummins Highway and Roanoke road and outlet in Anafra street.	Nov. 18, 1940	Jan. 26, 1941	W. R. P.	901.00 201.14 29.00 26.00	10" pipe, sewer. 15" pipe, surface drain. 10" minor drain. 6" house drain. 10 manholes. 3 catch-basins.	11,247 72
Ruskindale road, from Blake street to Wood avenue.			W. R. P.		Engineering records, no construction in 1941.	22 69
Summer Brook in private land, and Lewis street, between Frazer street and Edwards street.	Feb. 1, 1941	Nov. 6, 1941	W. R. P.	1,318.84 372.34 407.55 338.26 199.40	12" pipe, sewer. 20" pipe, surface drain. 18" pipe, surface drain. 15" pipe, surface drain. 12" pipe, surface drain. 15 manholes.	18,067 81
Tampa street, between Cummins Highway and Seminole street.	Dec. 12, 1940	April 26, 1941	W. R. P.	239.20 115.00	12" pipe, surface drain. 10" minor drain. 3 manholes. 1 drop inlet. 2 catch-basins.	1,372 63
Wood avenue, between Frazer street and Mariposa street, Hyde Park, and Tamilton avenue, between Wood avenue and 407 feet east to existing sewer.	Nov. 20, 1939	Feb. 4, 1941	W. R. P.	156.00	Minor drain	2,784 85
West street, between Gwinnett street and Hyde Park-West Roxbury line, Hyde Park. *	Jan. 6, 1941	Feb. 7, 1942	W. R. P.	(West street, Hyde Park section.) 1,302.05 1,312.60 (Poplar street, West Roxbury section.) 1,012.08 25.80 809.25 106.40 74.00 132.00	12" pipe, sewer. 24" pipe, surface drain. 20" pipe, surface drain. 15" pipe, surface drain. 12" pipe, surface drain. 10" minor drain. 13 manholes. 6 catch-basins.	38,126 32

* See Poplar street, West Roxbury, job.

W. R. P. Construction, January 1, 1941, to December 31, 1941, Inclusive. — Concluded.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
<i>HYDE PARK.—Concluded.</i>						
Williams avenue, between Highland street, and Prospect street.	Nov. 18, 1940	Aug. 23, 1941	W. R. P.	890.11 318.21 96.00	20" pipe, surface drain. 18" pipe, surface drain. 10" minor drain. 7 manholes. 12 catch-basins.	\$9,227 02
Walter street, from railroad to River street.	Oct. 7, 1940	April 11, 1941	W. R. P.	7.65 355.15 224.58 8.00 40.00	10" pipe, sewer. 24" pipe, surface drain. 20" pipe, surface drain. 15" minor drain. 10" minor drain. 3 manholes. 5 catch-basins. 1 drop inlet.	4,173 43
Rosebery road, from Taunton avenue to Greenfield road, and outlet in Taunton avenue.	.....	.....	W. R. P.	.....	No construction in 1941	2 72
West Milton street, from Readville street to Dedham line.	July 26, 1940	Sept. 10, 1940	W. R. P.	94.00	Minor drain	11 36
Warren avenue, between Beacon street and Summit street.	March 1, 1937	July 3, 1937	W. R. P.	.....	Engineering records.	14 81
<i>ROXBURY.</i>						
Highland street, demolition and erection project.....	July 2, 1940	Not completed.	W. R. P.	.....	Exterior complete. Roof complete. Drain complete. 1 manhole. 1 catch-basin.	23,947 66
Eustis street housing project, from Dearborn street to Albany street, and Harrison avenue, from Eustis to Taber street.	May 21, 1941	Nov. 21, 1941	W. R. P.	173.32 204.89 131.70 67.00	24" by 30" concrete sewer. 18" by 18" concrete sewer. 15" pipe, sewer. 10" catch-basin drain. 4 manholes.	16,121 39
Maywoods Brook in Sherman street, Ottawa street and Bowser street, from Ottawa street to Warren street.	May, 1932	Oct. 24, 1935	W. R. P. construction by Sewerage Works.	.....	Engineering records and plans.	3,078 86

Mission Hill housing project	July 1, 1941	July 31, 1941	W. R. P.	1 manhole 4 catch-basins regulated. Materials delivered in July, 1941, for same.	389 98
CITY PROPER.					
Huntington avenue subway	Jan. 1, 1941	Dec. 31, 1941	W. R. P.	Transit project, inspection by Sewer Division only.	2,187 12
Massachusetts avenue, from Albany street to Columbus avenue.	July 11, 1940	Dec. 18, 1940	W. R. P.	Engineering, no construction in 1942.	17 99
Tremont street, from Rutland square to Arlington square.	May 20, 1940	July 27, 1940	W. R. P.	Engineering	223 06
					\$329,054 31
DEBITS.					
Sewerage Works charges paid by W. R. P.				\$10,632 71	
Sewer Service charges paid by W. R. P.				2,513 29	
Debit transfers from W. P. A.				66,134 90	
Error in pay roll charges				3,308 14	82,589 04
					\$411,643 35
CREDITS.					
Correction of error in pay roll charges				\$3,308 14	
W. R. P. charges paid by Sewerage Works				38,191 37	
Sewer Service stock used on W. R. P. projects				1,017 80	
Sewerage Works stock used on W. R. P. projects				3,160 55	
Sewer Service trucks used on W. R. P. projects				2,234 25	
Sewer Service compressor used on W. R. P. projects				96 00	
W. R. P. charges paid by W. P. A.				\$5,726 18	133,734 29
Total expenditures, 1941					\$277,909 06

Sewerage Works, Construction, January 1, 1941, to December 31, 1941, Inclusive.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
EAST BOSTON.						
Havre street, from Maverick street to Decatur street.	Sept. 15, 1941	Oct. 21, 1941	Edward M. Matz, Inc.	457.05 49.00	15" pipe, sewer. Minor drain. 3 manholes. 1 connection.	\$5,911 02
Porter street, from Cottage street to airport.	Oct. 15, 1941	Dec. 30, 1941	State of Massachusetts (under chapter 90).		Frames, covers and traps furnished for 6 catch-basins. 1 manhole. 28 manhole steps.	245 70
BRIGHTON.						
Chestnut Hill avenue, from Hatherly road to Chiswick road.	Oct. 1, 1941	Nov. 17, 1941	E. L. Oak	310.00 305.00	10" pipe, sewer. 10" pipe, surface drain. 1 manhole.	2,891 94
Goodenough street, from Faneuil street to North Beacon street.	Sept. 12, 1941	Oct. 6, 1941	J. D'Amico	544.00 563.00	10" pipe, surface drain. 10" pipe, sanitary sewer. 5 manholes. 2 catch-basins.	2,408 80
WEST ROXBURY.						
Blasting rock in West Roxbury and Brighton.	Jan. 15, 1940	Feb. 28, 1941	R. Zoppo	2,661.05	Cubic yards of rock blasted	3,795 00
Harding road, between Hadwin way and Stella road, and outlet in Stella road to Stony Brook conduit.	Aug. 6, 1941	Sept. 4, 1941	Frank J. Jacobs	400.00 158.00	12" pipe, surface drain. 10" pipe, surface drain. 4 manholes. 4 catch-basins.	4,018 39
Hewlett street brook	Sept. 15, 1941	Sept. 27, 1941	The Prompt Contractors, Inc.	850.00	5' by 4' stone culvert repaired	1,641 07
Jaeger terrace, Rickerhill road, Churchill road, Wachusett street, Partridge street (done in connection with Paving Division contract).	Aug. 4, 1941	Sept. 13, 1941	Earl M. Carriere		13 catch-basins.	3,545 38

Roswell street, Amory avenue, Rockvale circle and Amory street.	Aug. 12, 1941	Dec. 16, 1941	Charles Capone	..... 118.00	8 catch-basins. 1 catch-basin remodelled. 1 drop inlet. 10" catch-basin drain.	1,006 29
Herbertson road, Casper street and Crehore road (done in connection with Paving Division contract).	Sept. 10, 1941	Nov. 15, 1941	Edward M. Matz	..... 125.00	Minor drain. 7 catch-basins.	1,149 67
Repaying sewer trenches in various streets and various districts.	Nov. 10, 1941	Dec. 19, 1941	J. J. Callahan	.....	9,000 square yards macadam placed on sewer trenches.	11,102 66
DORCHESTER.						
Blasting rock in Dorchester and Hyde Park...	Jan. 12, 1940	Dec. 31, 1940	R. Zoppo	..... 757.85	Cubic yards rock blasted	2,865 40
Beatrice street, between Paula road and Groveland street, Gally avenue, from 40 feet southeast of Morrier avenue to 380 feet southeasterly, and Barna road, from Gally avenue to 140 feet northeasterly.	May 26, 1941	July 12, 1941	Contractors, Inc.	..... 945.40 944.00 49.00 10.00	10" pipe, sewer. 12" pipe, sewer drain. 6" minor drain. 10" minor drain. 11 manholes.	6,641 63
Clover street, from Gallivan Boulevard to Minot street.	Aug. 1, 1941	Sept. 2, 1941	The Prompt Contractors, Inc.	..... 446.80 447.70 38.00 86.00	10" pipe, sewer. 12" pipe, sewer drain. 10" minor drain. 6" minor drain. 6 manholes. 4 catch-basins.	3,739 14
Lakeside avenue, from Sprague Pond to Sprague street, and Sprague street, from Lakeside avenue to 70 feet northwesterly, Hyde Park.	Sept. 16, 1941	Sept. 24, 1941	Baker & Co.	..... 96.10 165.00 64.00	13" reinforced concrete pipe, surface drain. 15" pipe, surface drain. 10" pipe, minor drain. 3 manholes. 4 catch-basins.	2,070 97
Edgewater Drive	July 30, 1939	Oct. 7, 1939	Paving Division (W. P. A.)	..... 461.84	Engineering records	4 64
Blue Hill avenue, from Charlotte street to Columbia road.	Sept. 25, 1941	Dec. 2, 1941	Baker & Co.	..... 6.00 337.00	12" reinforced concrete surface drain. 24" pipe, surface drain. 10" minor drain. 4 manholes. 6 catch-basins. 4 special catch-basins. 11 track inlets.	6,153 09

Sewerage Works, Construction, January 1, 1941, to December 31, 1941, Inclusive.—Concluded.

LOCATION.	Begun.	Finished.	Built by.	Length in Feet.	Character.	Amount Expended in 1941.
DORCHESTER.—Concluded.						
Burgoynes street, Cedar Grove street, Faunce road, Rita road and Woodale street.	July 8, 1941	Sept. 30, 1941	Edward M. Matz, Inc.	150.00	10" minor drain. 7 catch-basins.	\$2,877 89
Merrier avenue, from existing sewer to 194 feet westerly; and in Regan road, from Range road 90 feet westerly.	July 21, 1941	July 25, 1941	The Prompt Contractors, Inc.	667.50 668.50	10" pipe, sewer. 12" pipe, surface drain. 5 manholes.	1,174 16
Merrier avenue, from existing sewer 80 feet west of Range road to 366 feet westerly.	Oct. 10, 1941	Oct. 23, 1941	The Prompt Contractors, Inc.	374.50 360.50 8.00	10" pipe, sewer. 12" pipe, surface drain. 10" minor drain. 5 manholes.	2,370 87
Danbury road (Ward 18), from Wood avenue to George street, and Auriga street (Ward 16), from Westglow street to 435 feet westerly.	Sept. 8, 1941	Sept. 10, 1941	Samuel J. Tomasello Corporation.	69.45 72.00 2.00	12" pipe, surface drain. 10" minor drain. 15" minor drain. 6 catch-basins.	1,276 04
Tenean creek.					Preliminary engineering.	53 64
Concrete pavement and sewerage works in Glover court, South Boston; Melville lane, Dorchester; Magnolia street, Wave avenue, Rossierin road, Davidson avenue, St. Brendan road, Dorchester, and Greiter road, West Roxbury.	Sept. 15, 1941	Nov. 15, 1941	Baker & Co.	20.00 14.00	15" catch-basin drain. 10" minor drain. 2 catch-basins. 2 drop inlets. Reg'd. catch-basins.	821 83
Wendover street, Dorchester, and Glendale terrace, West Roxbury.	Dec. 5, 1941	Dec. 13, 1941	Frank J. Jacobs Company.	44.00	10" minor drain.	474 32
HYDE PARK.						
Construction of surface drains in conjunction with sanitary sewers, built under release agreements in Deforest street, Hal-iron street, McDonald street, Bates street and Grassmere road.	June 23, 1941	Sept. 9, 1941	Frank J. Jacobs under contract with Contractor Wolsey.	22.00 70.00 3,456.26 737.37 2,632.24	15" cast-iron pipe, surface drain. 12" cast-iron pipe, surface drain. 10" pipe, sewer. 15" pipe, surface drain. 12" pipe, surface drain. 37 manholes.	6,372 92

Poplar street, from Deforest street to Hyde Park line, and West street, from West Roxbury line to 265 feet southerly.	Aug. 11, 1941	Aug. 30, 1941	D. Rufo	1,296.00	6" pipe, sewer	1,140 43
Wood avenue (Ward 18), from River street to Cummins Highway.	Aug. 8, 1941	Nov. 3, 1941	Charles Capone	352.00	10" minor drain 10 catch-basins.	2,733 69
Fairfax avenue, from 385 feet east of Ruskin road to 500 feet easterly.	Dec. 8, 1941	Not completed.	Charles Struzziery		No construction in 1941	427 35
ROXBURY.						
Parker street, from Delhi avenue to 156 feet southerly.	Nov. 18, 1941	Dec. 3, 1941	Charles Struzziery		1 new catch-basin. 1 catch-basin remodelled. 1 catch-basin abandoned. 1 drop inlet.	485 86
CITY PROPER.						
Central Wharf, from Atlantic avenue to 650 feet easterly.	Dec. 8, 1938	Sept. 1, 1939	N. Gibotti Company		Execution of contract \$1,850, final payment \$1,000.	2,850 00
Newbury street, from Arlington street to Clarendon street.	Dec. 1, 1941	Not completed.	Rufo Construction Company.		No construction in 1941	410 39
						\$82,660 18

Sewerage Works, 1941.

Accounts.	Totals.	Labor.	Compressors, Pumps and Trucks.	Tools and Materials.	Contractors.	Sundries.
Officers' and engineers' salaries	\$49,424 28	\$49,424 28				
Officers' and engineers' expense	12,274 18	6,237 92	\$3,758 13	\$1,534 01	\$409 70	\$334 42
Miscellaneous	2,822 25	2,395 02	44 25	8 35	374 63	
Land-takings	1,314 91					1,314 91
New manholes, entire city	8,368 42	4,487 66	739 00	1,026 40	2,114 36	1 00
New catch-basins, South Boston	1,851 60	1,420 35	186 00	245 25		
New catch-basins, East Boston						
New catch-basins, Charlestown	941 90	714 14	114 00	113 76		
New catch-basins, Brighton	2,568 92	958 46	117 00	314 14	1,179 32	
New catch-basins, West Roxbury	6,329 97	3,738 87	522 00	796 82	1,271 28	1 00
New catch-basins, Dorchester	4,061 49	2,437 51	166 50	407 18	1,050 30	
New catch-basins, Hyde Park	2,074 79	1,360 73	210 00	179 06	325 00	
New catch-basins, Roxbury	6,734 52	5,241 11	702 00	790 66		75
New catch-basins, City Proper	7,553 03	6,222 35	573 00	462 77	289 41	5 50
Release sewers	1,600 82	1,161 59		318 85	120 38	
Stock	2,704 84			2,709 84		
Holiday	1,152 59	1,152 59				
Unadvertised jobs	4,080 89	941 49	1 50	361 58	2,774 57	1 75
Miscellaneous totals	\$115,864 40	\$87,894 07	\$7,133 38	\$9,268 67	\$9,908 95	\$1,659 33
Sewers built, entire by city	82,660 18	13,813 00	336 94	6,459 76	61,893 48	157 00
Totals	\$198,524 58	\$101,707 07	\$7,470 32	\$15,728 43	\$71,802 43	\$1,816 33

LESS CREDITS.

Maintenance stock used on construction	\$1,859 16				1,859 16	
Construction stock used on construction	7,084 74				7,084 74	
Trucks used on construction	3,705 25					3,705 25
Error on pay roll charge	969 17			969 17		
Construction charges paid by W. R. P.	10,632 71			10,632 71		
Construction charges paid by maintenance.	2,902 02			2,902 02		
Debit Transfers:						
Paving Service.	3,700 00			3,700 00		
Water Service.	2,165 00			2,165 00		
Bridge Service.	2,300 00			2,300 00		
Total credits		\$35,318 05	\$22,668 90		\$8,943 90	
Totals		\$103,206 53	\$79,038 17		\$3,765 07	\$71,802 43
Plus Debits.						
Maintenance charges paid by sewerage works						
W. R. P. charges paid by sewerage works		20,153 82	16,339 03		3,803 73	11 06
Correction of error on pay roll charge		38,191 37	38,035 13		131 22	25 02
Debit transfers from maintenance:						
August 1, 1941, trucks		969 17	969 17			
October 29, 1941, trucks		2,059 00			2,059 00	
		1,891 50			1,891 50	
Total expenditures		\$226,471 39	\$134,381 50		\$10,719 48	\$71,802 43
						\$1,852 41

APPENDIX E.

REPORT OF THE DIVISION ENGINEER OF
THE WATER DIVISION.

BOSTON, January 2, 1942.

To the Commissioner of Public Works.

I respectfully submit the following report of the activities of the Water Division, operations and expenditures for the fiscal year ending December 31, 1941:

ENGINEERING BRANCH.

This branch of the Water Division was engaged in the extension and improvement of the distribution system. The extension of main pipe and the relaying work was done by contract and W. P. A. forces under the general supervision of the division's regular engineering and inspection forces. Funds were supplied by the Federal Relief Administration for the labor used by the so-called W. P. A. forces, and a portion of the material used on the work, and the funds of the Water Division, were used to supply cast-iron pipe specials, gates, hydrants, lead, boxes, etc.

A total of 11,982 feet of pipe were either laid or relaid, varying in sizes from 3-inch to 24-inch, inclusive, of which the W. P. A. forces performed 2,874 feet or .544 miles.

	Pipe Laid, Linear Feet.	Pipe Relaid, Linear Feet.
South Boston	121	0
City Proper	96	1,048
Dorchester	3,067	312
Brighton	334	0
West Roxbury	1,296	0
Hyde Park	4,077	873
East Boston	261	497
Totals	9,252	2,730

The particular streets in which the above work was performed are shown on the accompanying tables.

DISTRIBUTION BRANCH.

The regular work of the Distribution Branch, consisting of installation of new services and fire pipes, repairing of leaks, caring for complaints, shutting off and letting on water, freeing of stoppages in service pipes, etc., was performed in such a manner and at such periods as to cause a minimum delay and inconvenience to applicants for water, water takers and the general public.

A large increase in the amount of work performed was occasioned by the laying out of new streets with the resultant regulating of gate boxes, shut-off frames and covers, hydrants, services and the installation of new services on the relaying work.

The machine shop and plumbing shop were forced to handle all the drilling and connecting of services occasioned by the above-mentioned forces, in addition to the regular work carried on in these shops, such as the assembling and machining of gates, valves and hydrants.

Due to the decreasing of the personnel, and no replacements made in the repair gangs of the Water Division, it has been necessary to engage the services of contractors to assist the department at various times throughout the year in repairing of leaks and laying and relaying of service pipes.

In order to check the leakage of water, a Pitometer Survey was started in the summer of 1941, and a contract was let for the Charlestown district, the contractor to be paid for the actual amount of leakage found, not to exceed a certain fixed sum. Upon completion of the Charlestown district another contract was entered into for the high and low service of the downtown section of the city on the same basis.

BUSINESS OFFICE.

The campaign inaugurated in 1938 to enforce the payment of outstanding water bills is still in force. Customers in arrears are notified that the flow of water will be reduced, but yet enough water is left on the premises to provide a minimum for health and sanitary requirements. As a result of this campaign the Water Division ended the year 1941 with a surplus of \$639,584.02, this surplus being due mainly to the collection of bills past due.

Main pipe petitions received	12
Domestic service applications	494
Fire pipe applications	20
Special meter tests	279
Hydrant permits issued	20
Repair deposits received	93
Miscellaneous deposits	155

APPROPRIATIONS, EXPENDITURE AND REVENUE.

Amount appropriated	\$1,101,343 35
Amount expended	1,058,978 06

Balance	\$42,365 29
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Amount of money collected during the year	\$4,997,949 03
Amount of expenditures from all sources	\$4,358,365 01

The Metropolitan assessment for 1941 amounted to \$3,060,278.52, an increase of \$381,113.20 over the assessment for 1930.

Total amount billed, 1941	\$4,892,269 11
Total amount collected in 1941 bills as of December 31, 1941	\$3,856,694 26
Total amount abated for 1941 bills as of De- cember 31, 1941	\$27,473 79
Total amount collected in 1941 on bills ren- dered prior to 1941	\$1,020,579 14

This department contacts the water consumers very frequently throughout the year, and the conduct of the office has been such that I believe a spirit of good will between the customers and the employees has been brought about which is beneficial to the consumer and the city.

Respectfully submitted,

DANIEL M. SULLIVAN,
Division Engineer.

**Statement of Each Year's Water Rates, 1912 to 1941, Inclusive,
With Outstanding Balances As of December 31, 1941.**

ACCOUNT OF YEAR.	Amount Assessed.	Amount Abated.	Collections and Credits.*	Amount Outstanding.
1912	\$3,001,771 87	\$58,369 39	\$2,943,402 48	
1913	3,004,331 52	50,147 90	2,954,183 62	
1914	3,034,885 83	64,663 01	2,970,232 82	
1915	2,960,797 45	57,782 09	2,903,015 36	
1916	3,130,590 53	67,771 69	3,062,818 84	
1917	3,120,878 86	77,353 75	3,043,525 11	
1918	3,359,714 95	162,415 52	3,197,299 43	
1919	3,210,147 91	95,812 76	3,114,335 15	
1920	3,503,677 88	123,509 90	3,380,167 98	
1921	3,615,663 51	90,946 23	3,524,717 28	
1922	3,612,715 51	90,453 27	3,522,262 24	
1923	3,817,642 72	77,449 02	3,740,193 70	
1924	3,832,531 26	43,678 41	3,783,421 94	\$5,430 91
1925	3,875,434 21	39,139 26	3,829,331 65	6,963 30
1926	3,910,119 54	44,694 94	3,858,535 32	6,889 28
1927	3,979,153 63	44,201 82	3,918,697 64	16,254 17
1928	4,418,039 84	37,832 66	4,371,982 42	8,224 76
1929	5,018,524 39	45,329 30	4,960,007 66	13,187 43
1930	4,864,180 27	44,537 46	4,801,811 31	17,831 50
1931	4,749,546 18	45,942 24	4,676,934 87	26,669 07
1932	4,611,461 41	39,959 70	4,538,915 59	32,586 12
1933	4,572,539 96	38,162 99	4,477,875 02	56,501 95
1934	4,703,863 07	61,284 54	4,581,380 80	61,197 73
1935	4,630,717 54	50,795 32	4,508,930 68	70,991 54
1936	4,671,732 90	37,684 04	4,588,592 22	45,456 64
1937	4,719,332 74	32,090 36	4,688,044 72	† 802 34
1938	4,719,959 75	43,672 04	4,676,707 71	† 420 00
1939	4,571,646 12	54,185 98	4,484,832 64	32,627 50
1940	4,660,269 40	49,582 36	4,472,401 18	138,285 86
1941	4,892,269 11	27,473 79	3,848,990 07	1,015,805 25
1937 and 1938 added to 1939 tax.....	606,767 13	28,847 17	575,743 55	2,176 41
Total outstanding water rates December 31, 1941.....				\$1,555,857 08

* Credits have been made since August, 1937, of Tax Sales Receipts, to water accounts for every year from 1929 to 1941, inclusive, reducing outstanding balances for these years.

† Credit balances to be adjusted in 1942.

METER BRANCH, WATER DIVISION.

Table No. 1. Statement of Work Done During the Year 1941.

MAKE.	Applied.	Discontinued.	METERS CHANGED.		Tested.	Repaired in Service.	Repaired in Shop.	Resets.
			Out.	In.				
Hersey disc.	462	357	2,804	4,543	6,148	1,713	2,846	453
Worth disc.	1	48	566	114	611	174	71	5
Watch dog.	20	92	1,485	712	822	429	878	46
King	1	23	435	83	353	125	41	9
Federal.		3	47		50	24	4	
American		2	54		36	6	11	
Lambert			11		9	5		
Crown.			20		13	12		
Trident		1	4	1	6	19	2	
Hersey rotary			10		17			
Arctic.			2		2	22	5	
Nash.			17		15	6		
Hersey compound	39		1	11	12	24	4	
Keystone.		1	7		7			
Hersey detector		3	12	11	26	158	8	1
Totals.	523	530	5,475	5,475	8,127	2,717	3,874	514

Table No. 2. Meters in Service December 31, 1941.

MAKE.	DIAMETER IN INCHES.											Total.
	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	
Hersey disc.....	57,076	3,955	1,877	1,004	459	162	133	32	1	.....	.....	64,699
Worth disc.....	5,430	14	20	26	42	13	.....	.....	.....	.....	.....	5,545
Watch dog.....	20,423	952	940	709	449	391	90	.....	.....	.....	.....	23,954
King.....	2,983	202	6	15	30	.....	.....	.....	.....	.....	.....	3,236
Federal.....	495	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	495
American.....	520	58	19	.....	.....	.....	.....	.....	.....	.....	.....	597
Lambert.....	192	64	42	.....	12	2	.....	.....	.....	.....	.....	312
Crown.....	171	299	27	53	65	21	.....	6	.....	.....	.....	642
Trident.....	108	.....	6	1	11	21	13	1	1	2	.....	164
Hersey compound.....	.....	.....	.....	.....	5	64	50	25	.....	.....	.....	144
Hersey detector.....	.....	.....	.....	.....	.....	4	49	64	33	24	6	180
Arctic.....	1	.....	.....	23	20	17	10	.....	.....	.....	.....	71
Empire.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
Nash.....	42	228	8	.....	6	.....	.....	.....	.....	.....	.....	284
Keystone.....	132	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	139
Hersey rotary.....	324	222	110	94	173	52	21	12	.....	.....	.....	1,008
Totals.....	87,913	6,001	3,055	1,925	1,272	747	366	140	35	26	6	101,486

Table No. 3. Meters in Shop December 31, 1941.

MAKE.	DIAMETER IN INCHES.									Total.
	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	
Hersey disc.....	473	197	36	12	....	7	3	....	....	728
Hersey compound .....	....	....	....	....	....	3	12	1	....	16
Hersey detector.....	....	....	....	....	....	....	....	....	1	1
Hersey rotary.....	....	2	....	....	....	....	....	....	....	2
Watch dog.....	1,111	76	136	2	1	....	....	....	....	1,326
Worth disc.....	145	....	....	1	1	....	....	....	....	147
King.....	194	21	23	14	5	....	....	....	....	257
Arctic.....	....	....	....	5	2	4	3	....	....	14
American.....	18	8	....	....	1	....	....	....	....	27
Lambert.....	2	....	....	1	....	....	....	....	....	3
Federal.....	36	....	....	1	....	....	....	....	....	37
Nash.....	10	....	1	....	....	....	....	....	....	11
Trident.....	....	....	....	....	....	....	1	....	....	1
Totals.....	1,989	304	196	36	10	14	19	1	1	2,570

Table No. 4. Meters Purchased in Year 1941.

MAKE.	DIAMETER IN INCHES.											Total.
	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	3	4	6	8	10	
Hersey disc.....	1,500	75	50	1	5	10	....	....	....	....	....	1,641
Hersey compound .....	....	....	....	....	....	5	24	30	6	....	....	65
Hersey detector.....	....	....	....	....	....	....	....	....	1	1	1	3
Totals.....	1,500	75	50	1	5	15	24	30	7	1	1	1,709

Table No. 5. Meters Reset.

MAKE.	DIAMETER IN INCHES.							Total.	Occupied.	Connection Pieces.
	$\frac{3}{4}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	4	6			
Hersey disc.....	405	25	14	4	4	1	.....	453	121	332
Watch dog.....	33	5	5	2	1	.....	.....	46	17	29
King.....	9	.....	.....	.....	.....	.....	.....	9	1	8
Worth disc.....	5	.....	.....	.....	.....	.....	.....	5	1	4
Hersey detector.....	.....	.....	.....	.....	.....	.....	1	1	1	.....
Totals.....	452	30	19	6	5	1	1	514	141	373

Table No. 6. Meters Changed in 1941.

MAKE.	METERS OUT. DIAMETER IN INCHES.											Total.
	$\frac{3}{4}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	
Hersey disc.....	2,250	228	188	89	42	4	3	.....	.....	.....	.....	2,804
Hersey detector.....	.....	.....	.....	.....	.....	.....	3	1	4	3	1	12
Hersey compound.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1
Hersey rotary.....	.....	1	4	1	3	.....	.....	1	.....	.....	.....	10
Worth disc.....	534	10	11	5	6	.....	.....	.....	.....	.....	.....	566
Watch dog.....	1,125	99	139	69	29	21	3	.....	.....	.....	.....	1,485
King.....	358	25	32	17	3	.....	.....	.....	.....	.....	.....	435
Nash.....	7	3	6	1	.....	.....	.....	.....	.....	.....	.....	17
American.....	29	23	1	.....	1	.....	.....	.....	.....	.....	.....	54
Lambert.....	3	4	3	1	.....	.....	.....	.....	.....	.....	.....	11
Federal.....	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
Trident.....	3	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	4
Crown.....	3	2	4	3	6	2	.....	.....	.....	.....	.....	20
Empire.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Keystone.....	1	4	1	.....	.....	.....	.....	.....	.....	.....	.....	6
Arctic.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Totals.....	4,360	399	389	187	90	30	10	2	4	3	1	5,475

Table No. 6. Meters Changed in 1941.—Concluded.

MAKE.	METERS IN. DIAMETER IN INCHES.											Total.
	$\frac{3}{8}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	10	12	
Hersey disc.....	3,863	380	137	104	56	....	1	2	....	....	....	4,543
Hersey detector.....	....	....	....	....	....	....	2	....	6	2	1	11
Hersey compound.....	....	....	....	....	2	6	3	....	....	....	....	11
Worth disc.....	103	1	5	4	1	....	....	....	....	....	....	114
Watch dog.....	502	34	56	69	32	17	2	....	....	....	....	712
King.....	67	4	6	4	2	....	....	....	....	....	....	83
Nash.....	....	....	....	....	....	....	....	....	....	....	....	....
American.....	....	....	....	....	....	....	....	....	....	....	....	....
Lambert.....	....	....	....	....	....	....	....	....	....	....	....	....
Federal.....	....	....	....	....	....	....	....	....	....	....	....	....
Trident.....	....	....	....	....	....	1	....	....	....	....	....	1
Crown.....	....	....	....	....	....	....	....	....	....	....	....	....
Arctic.....	....	....	....	....	....	....	....	....	....	....	....	....
Totals.....	4,535	419	204	181	93	24	8	2	6	2	1	5,475

Table No. 7. Cause for Meter Changes.

MAKE.	Test.	Do Not Register.	No Force.	Enlarged.	Spindle Leak.	Coupling Leak.	Frost.	Set Backwards.	Do-faced.	Total.
Hersey disc.....	309	1,936	33	17	111	275	43	14	66	2,804
Hersey detector.....	4	3	.....	5	.....	.....	.....	.....	.....	12
Hersey compound.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Hersey rotary.....	2	8	.....	.....	.....	.....	.....	.....	.....	10
Worth disc.....	132	244	11	3	15	54	86	7	14	566
Watch dog.....	34	1,306	27	5	89	.....	.....	3	21	1,485
King.....	3	291	45	1	18	36	30	2	9	435
Nash.....	2	1	2	.....	.....	6	2	.....	4	17
American.....	.....	17	2	.....	.....	12	20	.....	3	54
Lambert.....	.....	2	2	.....	.....	4	3	.....	.....	11
Federal.....	1	18	1	2	.....	6	7	.....	12	47
Trident.....	.....	2	.....	.....	.....	1	.....	.....	1	4
Crown.....	1	5	4	.....	.....	3	4	.....	3	20
Empire.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Keystone.....	.....	3	.....	.....	.....	.....	.....	.....	3	6
Arctic.....	.....	1	.....	.....	.....	.....	.....	.....	1	2
Totals.....	488	3,838	127	33	233	397	195	26	138	5,475

Table No. 8. Meters Applied in 1941.

MAKE.	DIAMETER IN INCHES.								Total.
	$\frac{3}{8}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	
Hersey disc.....	410	18	13	5	8	5	3	...	462
Hersey compound.....					3	13	16	7	39
Watch dog.....	4			6	5	3	2	...	20
King.....	1								1
Worth disc.....	1								1
Totals.....	416	18	13	11	16	21	21	7	523

Meters applied on old services	9
Meters applied on new services	514
Total meters applied in 1941	523

Table No. 9. Meters Discontinued in Year 1941.

MAKE.	DIAMETER IN INCHES.									Total.	Discontinued.	Vacant.	Connection Pieces.
	$\frac{3}{8}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	2	3	4	6	8				
Hersey disc.....	504	27	23	15	10	3	...	...	...	582	357	106	119
Worth disc.....	79	1	2	...	...	...	...	...	...	82	48	12	22
Watch dog.....	152	9	17	9	2	...	...	...	...	189	92	47	50
King.....	45	...	...	...	11	...	...	...	...	56	23	18	15
Hersey detector.....							1	1	1	3	3		
Lambert.....	2									2	...	2	
American.....	2									2	2		
Federal.....	7									7	3	2	2
Keystone.....	4					1	...	...	...	5	1	4	
Crown.....			2							2	...	2	
Trident.....						1	...	...	...	1	1		
Totals.....	795	37	44	24	23	5	1	1	1	931	530	193	208

Table No. 10. Meters Repaired in Service.

MAKE.	Defaced and Broken Clocks.	Spindle Leaks.	Broken Counter Boxes.	Special Seals.	Examinations.	Coupling Leaks.	Total.
Hersey disc.....	718	484	39	88	72	312	1,713
Worth disc.....	41	34	9	9	13	68	174
Watch dog.....	63	261	22	17	26	40	429
King.....	14	87	4	1	7	12	125
Federal.....	3	11	1	4	2	3	24
American.....	2	2	2				6
Lambert.....	2	1				2	5
Crown.....	9		1		1	1	12
Hersey rotary.....	15					3	19
Nash.....	3			1	2		6
Arctic.....	6	3	4		8	1	22
Hersey detector.....	106		8		44		158
Hersey compound.....	7		2		15		24
Totals.....	989	883	93	120	190	442	2,717

Table No. 1.

Showing Length of Water Pipes and Connections Owned and Operated by Public Works Department, Water Division, Water Service, and Number of Valves in Same, December 31, 1941.

DIAMETER OF PIPES IN INCHES.																	
48	42	40	36	30	24	20	16	14	12	10	8	6	4	3	2	Totals.	
Length owned and operated December 31, 1940.	55,595	16,191	9,599	30,238	75,843	89,455	108,000	365,647	285	1,833,172	451,149	1,186,627	977,198	63,921	11,225	6,509	5,280,654
Gate valves in same.	26	4	5	31	50	75	74	758	14	5,181	1,577	4,429	3,190	550	19	16	15,990
Air valves in same.	60	5	10	33	113	84	53	101		64		5			1	14	546
Blow-offs in same.	11	5	6	11	33	37	52	76		166	40	203	141	66	11	6	864
Length laid and relaid during 1941.						125	168	191		1,193		8,517	173		261		10,028
Gate valves in same.							5			10	2	32	3	1			53
Air valves in same.																	
Blow-offs in same.																	
Length abandoned during 1941.						256	37	73		2,406	140	1,530	7,815	1,636	5		13,953
Gate valves in same.							2	3		14	3	12	38	6			78
Air valves in same.																	
Blow-offs in same.																	
Length owned and operated, including high pressure fire service December 31, 1941.	55,595	16,191	9,599	30,238	75,843	89,324	108,131	365,765	285	1,831,899	451,009	1,193,614	969,556	62,285	11,486	6,509	5,277,329
Gate valves in same.	26	4	5	31	50	75	72	760	14	5,177	1,576	4,449	3,155	545	19	16	15,974
Air valves in same.	60	5	10	35	113	84	53	101		64	1	5			1	14	546
Blow-offs in same.	11	5	6	11	33	37	52	76		166	40	203	141	66	12	5	864
High pressure fire service.							20,140	46,953		31,756							
																	98,849

999,492 miles in system, including high pressure fire service.
18,721 miles in high pressure fire service.

1941 — Financial Transactions — Water Service.

Cash balance from 1940		\$3,497 00
Receipts:		
Water rates and services	\$4,950,293 85	
Appropriation balance from Col- lecting Department	3,788 83	
Tax titles — water	40,369 35	
		<u>4,994,452 03</u>
		\$4,997,949 03
Expenditures from revenue:		
Current expenses and extension	\$1,058,978 06	
Collecting Department	98,711 81	
Auditing Department	200 00	
Refunded water rates	81 21	
Metropolitan assessment	3,060,278 52	
		<u>4,218,249 60</u>
		\$779,699 43
Expenditures from debt account:		
Boston water debt	\$46,454 49	
Interest on loans	17,090 00	
		<u>63,544 49</u>
		\$716,154 94
Cash forwarded to 1942	\$4,859 80	
		<u>4,859 80</u>
		\$711,295 14
Metropolitan assessment, credit		71,711 12
		<u>\$639,584 02</u>
Loan Account:		
Balance outstanding January 1, 1941,	\$585,000 00	
Paid during 1941:		
Boston water debt, \$46,454 49		
P. W. A. loans No. 1123, No. 4214 and No. 7223	26,545 51	
	<u>73,000 00</u>	
Balance outstanding December 31, 1941		<u>\$512,000 00</u>
Construction Account:		
Extension of mains (from revenue)		<u>\$57,497 82</u>
Cost of construction December 31, 1941	\$24,483,116 45	
Cost of construction December 31, 1940	24,425,618 63	
	<u>\$57,497 82</u>	
Increase in plant cost during year 1941		<u>\$57,497 82</u>
Cost of existing works December 31, 1941:		
Pipe, yards and buildings	* \$84,332 16	
Engineering expenses	57,873 58	
Distribution system	† 24,165,910 71	
Hyde Park water works	175,000 00	
		<u>\$24,483,116 45</u>
High pressure fire system		† 2,293,316 75
		<u>\$26,776,433 20</u>
Total cost		<u>\$26,776,433 20</u>

* \$10,500 deducted on account of abolishment of Charlestown Yard.

† Includes \$155,023.89 expended on high pressure fire system in 1925, 1926, 1931, 1932, 1933.

‡ \$33,850.96 deducted from cost of high pressure fire system on account of abandonment of Pumping Station, Battery street.

Shutting Off and Turning On Water in 1941.

Number of shut-offs for repairs	4,271
Number of premises turned on after repairs	3,063
Number of shut-offs for vacancy	909
Number of premises turned on for occupancy	712
Number of premises shut off for nonpayment of water rates	13,164
Number of premises turned on again after being shut off for nonpayment	749
Number of premises shut off on account of waste . .	15
Number of premises turned on again after being shut off for waste	7
Number of new service pipes turned on for the first time	334
Total number of times water was shut off or turned on	<u>23,224</u>

Table No. II.

HIGH PRESSURE FIRE SERVICE.

*Showing Length of Water Pipes, Connections, Hydrants and Valves in Same,
December 31, 1941.*

	20-Inch.	16-Inch.	12-Inch.	8-Inch.	6-Inch.	Totals.
Length owned and operated December 31, 1940.....	20,140	46,953	31,756	—	—	98,849
Gates in same.....	—	201	144	502	—	847
Blow-offs in same.....	—	—	—	—	6	6
Length laid in 1941.....	—	—	—	—	—	000
Gate valves in same.....	—	—	—	—	—	000
Length owned and operated December 31, 1941.....	20,140	40,953	31,756	—	—	98,849
Gate valves in same.....	—	201	144	502	—	847
Blow-offs in same.....	—	—	—	—	6	6
High pressure fire hydrants.....	—	—	—	—	—	505

18.72 miles of mains in system.

WATERWORKS STATISTICS, CITY OF BOSTON.

FOR THE FISCAL YEAR ENDING DECEMBER 31, 1941.

DISTRIBUTION.

Mains.

Kind of pipe: Cast iron, wrought iron, steel.

Size: 2-inch to 48-inch.

Extended, miles, 1.752.

Size enlarged, miles, .311.

Total miles now in use, 999.494. 2-inch to 48-inch, inclusive, high pressure fire service.

Public hydrants, decreased, 11.

Public hydrants now in use, 11,335.

Stop gates, decreased, 25.

Stop gates now in use, 15,974.

Stop gates smaller than 4-inch, 35.

Number of blow-offs, 864.

Range of pressure on mains, 30 to 90 pounds.

Service.

Kind of pipe and size: Lead and lead lined, $\frac{1}{2}$ -inch to 2-inch; cast iron, 2-inch to 16-inch; wrought iron and cement lined, $\frac{3}{4}$ -inch to 2-inch; brass and copper, $\frac{5}{8}$ -inch to 2 $\frac{1}{2}$ -inch.

Total service taps now in use as per metered services, 101,486.

Cost of Abandoned Main Pipe, 1941.

STREET.	Location.	District.	Size. (Inches.)	Feet.	Cost of Depart- ment Materials, Etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Palmer place.....	From Palmer street.....	Roxbury.	4	120	.....	.....	.....	.....	Federal Housing.
Prescott place.....	From Prescott street to end..	Roxbury.	4	110	.....	.....	.....	.....	Federal Housing.
Border street.....	Between Summer street and North Ferry.	East Boston.	4	240	.....	.....	.....	.....	Federal Housing.
Heath avenue.....	From Heath street to end....	Roxbury.	{ 4 6	{ 200 435	.....	.....	.....	.....	Federal Housing.
Orchard street.....	Between Eustis, Orchard Park and Yeoman streets.	Roxbury.	{ 4 6 12	{ 240 20 220	.....	.....	.....	.....	Federal Housing.
Posen street.....	Between Minden and Ark- low streets.	Roxbury.	{ 4 6 8	{ 70 290 20	.....	.....	.....	.....	Federal Housing.
Mulvey avenue.....	From Heath street to end. . .	Roxbury.	6	155	.....	.....	.....	.....	Federal Housing.
Minden street.....	Between Bickford and Wal- den streets.	Roxbury.	6	805	.....	.....	.....	.....	Federal Housing.
Arklow street.....	Between Posen and Walden streets.	Roxbury.	6	530	.....	.....	.....	.....	Federal Housing.
Heath place.....	Between Heath and Minden streets.	Roxbury.	6	360	.....	.....	.....	.....	Federal Housing.
Norwich street.....	Between Myrtle and Meander streets.	City.	6	225	.....	.....	.....	.....	Federal Housing.

Cost of Abandoned Main Pipe, 1941.—Concluded.

STREET.	Location.	District.	Size. (Inches.)	Feet.	Cost of Depart- ment Materials, Etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Remarks.
Mystic street.....	Between East Brookline and Malden streets.	City.	6	735	.....	.....	.....	.....	Federal Housing.
Meander street.....	Between Malden and East Dedham streets.	City.	6	340	.....	.....	.....	.....	Federal Housing.
Ryan street.....	Between Mystic street and Harrison avenue.	City.	6	270	.....	.....	.....	.....	Federal Housing.
Liverpool street.....	Between Sumner and Mave- rick streets.	East Boston.	6	490	.....	.....	.....	.....	Federal Housing.
Dearborn place.....	From Dearborn street to end.	Roxbury.	6	190	.....	.....	.....	.....	Federal Housing.
Renfrew street.....	Between Harrison avenue and Winslow street.	Roxbury.	6	220	.....	.....	.....	.....	Federal Housing.
Reed's court.....	Between Ambrose and Yeo- man streets.	Roxbury.	{ 6 8 }	{ 300 26 }	.....	.....	.....	.....	Federal Housing.
Winslow street.....	Between Zeigler and Eustis streets.	Roxbury.	{ 6 8 }	{ 260 340 }	.....	.....	.....	.....	Federal Housing.
Larkin street.....	Between Adams and Hamp- den streets.	Roxbury.	{ 6 8 }	{ 300 30 }	.....	.....	.....	.....	Federal Housing.
Taber street.....	Between Harrison avenue and end.	Roxbury.	{ 6 8 }	{ 170 280 }	.....	.....	.....	.....	Federal Housing.
Palmer street.....	Between Harrison avenue and Eustis street.	Roxbury.	{ 6 10 }	{ 610 140 }	.....	.....	.....	.....	Federal Housing.

Ulmer street.....	Between Minden street and T. G. Plant Company.	Roxbury.	{ 6 12 }	185 80	.....	.....	.....	.....	Federal Housing.
London street.....	Between Sumner and Mav- erick streets.	East Boston.	8	490	.....	.....	.....	.....	Federal Housing.
Border street.....	Between Sumner and Mav- erick streets.	East Boston.	12	490	.....	.....	.....	.....	Federal Housing.
Cross street.....	Between New and Border streets.	East Boston.	12	198	.....	.....	.....	.....	Federal Housing.
East Canton street.....	Between Mystic street and Harrison avenue.	City.	12	340	.....	.....	.....	.....	Federal Housing.
Chadwick street.....	Between Ambrose and Yeoman streets.	Roxbury.	12	320	.....	.....	.....	.....	Federal Housing.
Orchard Park street.....	From Adams street to 60 feet past Orchard street.	Roxbury.	{ 28 12 }	265 120	.....	.....	.....	.....	Federal Housing.
	Totals.....		{ 4 6 8 10 12 }	980 6,890 1,445 140 1,768	.....	.....	.....	.....
	Total abandonment.....		.....	11,223	.....	.....	.....	.....

Cost of Replacement of Main Pipe, 1941.

STREET.	Location.	District.	Size. (Inches.)	Feet.	Cost of Department Materials, Etc.	Cost of Labor.	Cost of Inspection.	Total Cost.	Original Size. (Inches.)	Feet.	Remarks. (Contracts.)
Gainsborough street....	At Huntington avenue.....	City.	12	69	\$357 03	.....	\$29 44	\$386 47	12	69	Transit Department.
Stock street.....	Between Minot street and Gallivan Boulevard.	Dorchester.	12	312	1,475 86	\$48 00	83 01	1,606 87	6	312	W. P. A.
Meridian street.....	Between Falcon and Concord streets.	East Boston.	12	217	655 88	686 55	51 52	1,393 95	12	217	Baker.
Concord street.....	Between Meridian and Brook streets.	East Boston.	12	280	1,630 85	558 19	58 88	2,247 92	12	280	Baker.
Laval street.....	Between Arlington street and Central avenue.	Hyde Park.	8	656	1,686 34	4 00	184 00	1,874 34	4	656	W. P. A.
Summer street.....	Between Parrott street and Summer Street place.	Hyde Park.	8	217	510 06	.....	95 68	605 74	6	217	W. P. A.
Pineknay street.....	Between Charles street and Louisburg square.	City.	8	396	1,178 02	517 50	95 68	1,791 20	6	396	Baker.
Huntington avenue.....	At Massachusetts avenue.	City.	16 { 20 37	73 { 20 37	1,083 10	146 88	637 68	1,876 46	16 { 20 37	73 { 20 37	Transit Department.
Massachusetts avenue,	At Huntington avenue.....	City.	16 { 24 76	Steel { 62 76	156 21	.....	14 72	170 93	12 { 24 76	62 { 76	Transit Department.
Massachusetts avenue,	At Huntington avenue.....	City.	8 { 12 14 20 131 { 24 49	85 { 14 56 131 { 24 49	2,632 73	.....	287 04	2,919 77	8 { 12 20 24	85 { 70 180	Transit Department.
	Totals.....		8 { 16 20 24	1,354 { 892 191 168 125	.....	.....	.....	.....	4 { 12 20 24	656 { 925 85 698 73 37 256	
	Total replacements.....		.....	2,730	\$1,366 08	\$1,961 12	\$1,537 65	\$14,864 85	.....	2,730	

Cost of Extension of Main Pipe, 1941.

STREET.	Location.	District.	Size. (Inches)	Feet.	Cost of Depart- ment Materials, Etc.	Cost of Labor. (Contract.)	Cost of Inspection.	Total Cost.	Remarks. (Contracts.)
Whitby street.....	Between Ford and Ashley streets.	East Boston.	3	261	\$274 77	\$484 93	\$51 52	\$811 22	Matz.
Melvin side terrace.....	Between Dorchester avenue and Minton street.	Dorchester.	6	173	318 71	211 05	44 16	573 92	Baker.
Glenham street.....	Between Veterans of Foreign Wars Parkway and Perham street.	West Roxbury.	8	222	394 37	197 00	19 07	610 44	Jacobs.
Wimborough street.....	Between Tileston street and Taunton avenue.	Hyde Park.	8	257	586 09	79 35	88 32	753 76	W. P. A.
Huntington avenue	Opposite No. 94.....	City.	8	96	545 80	.....	88 32	634 12	W. P. A. and Transit De- partment.
Prospect street.....	Between Moreland and Gould streets.	West Roxbury.	8	600	1,027 26	572 99	47 84	1,648 09	Jacobs.
Deforest street.....	Between Poplar street and Grassmere road.	Hyde Park.	8	1,076	2,724 12	979 77	95 68	3,799 57	Jacobs.
Lewis street.....	Between Safford and West- minster streets.	Hyde Park.	8	502	1,040 62	726 85	66 59	1,834 06	Jacobs.
Clover street.....	Between Gallivan Boulevard and Minot street.	Dorchester.	8	508	2,017 75	30 00	184 00	2,231 75	W. P. A.
Barna road.....	From Galty avenue.....	Dorchester.	8	88	207 72	83 60	11 04	302 36	Baker.
Galty avenue.....	Between Mercier street and dead end.	Dorchester.	8	458	904 62	449 00	14 72	1,368 34	Baker.

Cost of Extension of Main Pipe, 1941.—Concluded.

Street.	Location.	District.	Size. (Inches.)	Feet.	Cost of Depart- ment Materials, Etc.	Cost of Labor, (Contract.)	Cost of Inspection.	Total Cost.	Remarks. (Contracts.)
Buchanan road.....	Between Andover and Wedg- mere road.	West Roxbury.	8	90	\$172 33	\$133 74	\$36 80	\$342 87	Jacobs.
Wedgewood road.....	From Buchanan road.....	Hyde Park.	8	25					
Hallron street.....	Between Deforest street and Grassmere road.	Hyde Park.	8	696	1,495 81	626 63	103 04	2,225 48	Jacobs.
Regan road.....	Between Gatty avenue and Range road.	Dorchester.	8	235	473 28	223 25	7 36	703 89	Baker.
Merrier avenue.....	Between Dorchester avenue and Alicia road.	Dorchester.	8	608		673 89	44 16	2,088 78	Baker.
Range road.....	At Mercier avenue.....	Dorchester.	12	35	1,370 73				
Beatrice road.....	Between Paula road and Groveland street.	Dorchester.	8	275	564 69	771 98	33 12	1,369 79	Baker.
Covington street.....	Between East Eighth street and Columbia road.	South Boston.	8	121	272 11	144 99	25 76	442 86	Baker.
Lee street.....	Between Carolina avenue and Child street.	West Roxbury.	8	141	316 14	201 58	22 08	539 80	Jacobs.
Beatrice road.....	Between Paula road and Groveland street.	Dorchester.	8	160	234 18	437 56	44 16	715 90	Baker.
Hallron street.....	Between McDonald street and dead end.	Hyde Park.	8	275	601 47	471 14	44 16	1,116-77	Jacobs.
Grassmere road.....	Between Bateman and Hall- ron streets.	Hyde Park.	8	440	933 98	405 68	44 16	1,383 82	Jacobs.

McDonald street	Between Bateman and Hall- ron streets.	Hyde Park.	8	525	1,091 31	492 92	58 88	1,643 11	Jacobs.
Goodenough street	Between Faneuil and North Beacon streets.	Brighton.	8	334	600 45	292 21	29 44	922 10	Jacobs.
Lewis street	Between Westminster and Elliot streets.	Hyde Park.	8	191	505 47	399 31	51 52	956 30	Jacobs.
Buchanan road	Between Morey road and con- nection.	West Roxbury.	8	243	443 53	292 08	43 80	689 41	Jacobs.
Edna road	Between Granite avenue and dead end.	Dorchester.	8	346	740 70	351 45	36 80	1,128 95	Baker.
Kennebec street	Between Currier and Mes- singer streets.	Hyde Park.	12	90	267 64	454 90	44 16	766 70	Driscoll.
Stock street	Between Minot street and Callivan Boulevard.	Dorchester.	12	176	646 88	.....	80 96	727 84	W. P. A.
	Totals		$\left\{ \begin{array}{l} 3 \\ 6 \\ 8 \\ 12 \end{array} \right.$	$\left\{ \begin{array}{l} 261 \\ 173 \\ 8,517 \\ 301 \end{array} \right.$					
	Total extension .....		.....	9,252	\$20,772 53	\$10,097 85	\$1,461 62	\$32,332 90	

APPENDIX F.

REPORT OF BOSTON AND CAMBRIDGE
BRIDGES COMMISSION.

BOSTON, January 2, 1942.

To the Honorable the Mayor.

SIR,—As Commissioner for the City of Boston, I respectfully submit herewith the annual report of the Boston and Cambridge Bridges Commission for the year ending December 31, 1941.

The commission is composed of two members, one appointed by the Mayor of the City of Boston and the other by the Mayor of the City of Cambridge, under provisions of chapter 467, Acts of 1898.

The commission has charge of the maintenance of the following-named bridges between Boston and Cambridge: Cottage Farm, Longfellow and Prison Point.

As there is no separate appropriation made for the City of Boston's portion of the expenses of this commission, the same is taken from the appropriation for the Bridge and Ferry Division, Bridge Service. The amount expended during the fiscal year ending December 31, 1941, under the regular appropriation, was \$4,854.92.

BRIDGES — CONSTRUCTION OF LONGFELLOW BRIDGE.

Under a loan for "Bridges — Construction of," a contract was awarded to J. A. Singarella Company, approved by the Mayor November 26, 1941, for strengthening the transverse floor beams between arch ribs D and E, both sides of the bridge, where directed. The work also includes repairing sidewalk railings, repairing arch posts and repairing or renewing cross bracing, etc., where directed. The estimated cost is \$38,580, of which amount Boston will pay one half and Cambridge one half. The work was started December 5, 1941, and will be completed in 1942.

Respectfully submitted,

GEORGE G. HYLAND,
Commissioner for the City of Boston.

**Boston and Cambridge Bridges. Expenditures for the Year Ending
December 31, 1941.**

Being the Portion Paid by the City of Boston, Which is One Half of the Total Expenditure.

	Administration.	Cottage Farm Bridge.	Longfellow Bridge.	Prison Point Bridge.	Total.
Salaries.....	\$50 00	.....	\$1,565 00	.....	\$1,615 00
Inspection.....	.....	\$182 00	210 00	\$214 00	606 00
Light.....	.....	870 93	1,707 66	.....	2,578 59
Rent.....	.....	.....	39 00	.....	39 00
Printing and stationery.....	14 60	14 60
Repairs.....	1 73	1 73
Totals.....	\$64 60	\$1,052 93	\$3,523 39	\$214 00	\$4,854 92

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